Prognostic Factors in the Treatment of Anxiety Disorders: Studies on Treatment Success and Failure in Behaviour Therapy

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Prognostic Factors in the Treatment of Anxiety Disorders: Studies on Treatment Success and Failure in Behaviour Therapy

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Contents

Introduction

The behavioural treatment of panic disorder (PD) and obsessive-compulsive disorder (OCD) has been the focus of a considerable body of research over the past 20 years. Success rates of between 60% and 85% have generally been reported (Clum, 1989; Jansson & Öst, 1982; Michelson & Marchione, 1991; Minichiello, Baer, & Jenike, 1988; Perse, 1988). Similar results have been found for cognitive-behavioural treatment of PD and OCD. Superior treatment effects of cognitive treatment alone, however, have as yet not been demonstrated (Acierno, Hersen, & Van Hasselt, 1993; Michelson & Marchione, 1991; Rapee, 1987). Antidepressant drugs and high potency benzodiazepines are also found to ameliorate the patients' panic symptoms and obsessive-compulsive symptoms, but are generally not found to be more effective than cognitive-behavioural treatment (Clum, 1989). Furthermore, their effectiveness is offset by several serious problems such as the patients' unwillingness to take medication, medication side effects, dependency problems for the high potency benzodiazepines, and high relapse rates after drug withdrawal (Clum, 1989; Marks, 1987; Michelson & Marchione, 1991; Telch, Tearnan, & Taylor, 1983). Behavioural treatment and cognitive-behavioural treatment are, therefore, generally considered to be the treatment of choice for PD and OCD.

The above success rates for the behavioural treatment of PD and OCD are impressive. They also indicate, however, a considerable variability of treatment outcome across patients and across treatment trials and that 15%-40% of PD and OCD patients do not improve. In addition, the figures reported might underestimate the actual number of PD and OCD patients that do not benefit from behavioural treatment in clinical practice because empirical research trials are conducted under controlled conditions and because the outcome figures of clinical research trials often do not include refusers, dropouts, and relapses.

Since empirical trials are frequently conducted under controlled conditions, patients with concomitant psychiatric disorders, for example, are generally excluded. Such controlled measures, though necessary for research, raise the question of whether the high success rates of controlled empirical trials can be generalized to regular clinical settings. Also, the effects of regular assessments of patients' progress during treatment, the application of treatment protocols and fixed time schedules,

extra supervision of the therapists and their rapidly accumulating experience level during a research trial with patients with one specific disorder may inflate the success rates.

Another consideration is that in the treatment outcome figures of clinical research trials, refusers, dropouts, and relapses are generally not included, although they constitute a substantial proportion of patients. Marks (1981) reported that 12% of 400 phobic and OCD patients who applied for treatment subsequently refused it. Foa, Steketee, Grayson, and Doppelt (1983b) found that 5%-25% of OCD patients refused treatment and 3%-12% dropped out of treatment. Rachman and Hodgson (1980) reported that 20% of OCD patients dropped out of treatment. For PD, dropout rates of 15-22% (Clum, 1989), 12% (Jansson & Öst, 1982), and 10% (Mavissakalian & Barlow, 1981) have been reported. A third group of patients not included in many time-limited, controlled clinical trials are patients who improve during treatment but relapse thereafter. In OCD patients, relapse rates of 9% (Emmelkamp & Rabbie, 1980) and 14% (Kirk, 1983) have been reported. In PD, relapse rates of less than 10% (Jacobson, Wilson, & Tupper, 1988), 7-13% (Fischer, Hand, Angenendt, Büttner-Westphal, & Manecke, 1988), and 12% (Clum, 1989) have been found.

The above considerations led several authors to conclude that it is more realistic to estimate that around half of PD and OCD patients in clinical practice are not helped by behavioural treatment (Michelson & Marchione, 1991; Perse, 1988; Salkovskis, 1989). One of the principal tasks in behaviour therapy research, therefore, is to learn why current behavioural treatment programmes do not work for a significant number of patients, in order to find ways of increasing treatment effectiveness.

A frequently used way of investigating the effectiveness of a particular behavioural treatment programme for a specific disorder is to compare its treatment results with those of one or more alternative treatments or with a placebo control group. When a homogeneous group of patients is randomly assigned to each of the treatment conditions an *experimental design* is used. Although experimental designs are extremely useful for making robust inferences about the effectiveness of the particular treatment programme compared to its alternatives, its usefulness is limited by the fact that treatment results are related to group assignment only. The researcher is particularly interested in the between-group variance of treatment outcome, but the within-group variance is seldomly the researcher's main goal. The result is that differences between the patients or between the characteristics of their complaints, that might also affect treatment outcome, are overlooked.

The same is true for treatment characteristics that are not considered to be specific for the treatment programmes that are under investigation. Behaviour therapists acknowledge that behavioural treatment programmes include factors that

might affect outcome but are not considered to be specific for their treatment programmes. These *nonspecific treatment factors* contain components of the therapeutic setting such as the relationship with an empathic and supportive therapist, patients' expectancy for improvement, patients' motivation, patients' restored hope, and treatment and therapist credibility (Frank, 1974; Lambert, Shapiro, & Bergin, 1986; Schaap, Bennun, Schindler, & Hoogduin, 1993; Van Dyck, Van der Velden, & Emmelkamp, 1991). It has become normal practice in experimental behaviour therapy research in recent years to include a placebo control condition which consists only of nonspecific treatment factors, in order to be able to make inferences about the additional, specific effects of the treatment programmes in the experimental conditions. Nevertheless, the inclusion of a placebo control condition does not help us to answer the question of how treatment outcome differences between the patients across the experimental conditions or within each of the experimental conditions are affected by particular nonspecific treatment factors. The preference for experimental designs in behaviour therapy research has led to a careful investigation of the effectiveness of alternative treatment programmes and behavioural techniques, but treatment outcome variance possibly related to treatments factors other than those specified in the experimental conditions, again, tends to be overlooked.

Prediction research is an alternative research strategy for investigating the effectiveness of a particular treatment programme. It follows naturally from the experimental designs discussed above. Once it has been empirically demonstrated that, for a particular disorder, a particular behavioural programme is more effective than its alternative treatments and that this programme should be considered the treatment of choice, research should focus on the identification of those patients that do not benefit from the treatment programme, in order to detect the refinements and modifications of the treatment programme that are needed. In contrast to experimental designs, treatment outcome is investigated in terms of within-group variance. Hence, the treatment programme is standardized and offered to a group of patients in such a way that all patients receive the same and the same amount of treatment. Outcome variance is investigated in terms of the patient characteristics, symptom characteristics, and nonspecific treatment factors that might affect outcome.

Because powerful and well researched behavioural treatment programmes are currently available for PD and OCD, the object of the present dissertation is to identify factors that affect the behavioural treatment outcome of several of these programmes. Our goal is to contribute to the growing empirical literature on prognostic factors in the behavioural treatment of anxiety disorders. Once prognostic factors have been clearly identified for patients who are treated with an appropriate treatment programme for a particular disorder, the treatment programme can be adjusted or specific interventions can be developed that precede the treatment

programme for those patients who have a high probability of becoming treatment failures. If prognostic factors can be assessed early in treatment, the treatment of these patients can be adjusted in time to increase the probability of their achieving beneficial changes.

The dissertations consists of two parts. In Part 1, two empirical studies on prognostic factors in the behavioural treatment of PD and OCD are presented. The patients received standardized treatments for a fixed period of time. From the clinical literature, possible prognostic factors were examined. Some of these are complaint-related in nature (e.g., duration or severity of symptoms, dual diagnoses, level of depression), others are demographic (e.g., sex, age, education), social-psychological (e.g., marital satisfaction, social and occupational factors), or nonspecific treatment factors (e.g., quality of the therapeutic relationship, patients' motivation for treatment, treatment or outcome expectancy). Not all possible prognostic factors found in the literature could be included in the empirical studies. Those included were assessed early in treatment. In both studies, we sought to answer two main questions: (a) "Does each of the prognostic factors included separately predict treatment outcome?" and (b) "Which of the prognostic factors conjointly predict treatment outcome?" We did not expect that both questions would necessarily lead to different predictors of treatment outcome. The addition of the second question is based rather on the assumption that the probability of the patient becoming a treatment failure might increase considerably when more than one disadvantageous prognostic factor is present. In other words, we were interested in the possibility that combinations of prognostic factors might be stronger predictors of treatment outcome than the prognostic factors alone.

Part 2 of the dissertation focusses on the impact of process variables on behavioural treatment outcome of anxiety disorders. From the outset, behaviour therapists directed their research towards the development and testing of specific behavioural treatment programmes for specific complaints or disorders. However, empirical studies that included placebo control conditions demonstrate that about half of the effect of a specific, effective behavioural programme might be attributable to nonspecific treatment factors (Clum, 1989; Lambert et al., 1987). Since many of the behavioural techniques for anxiety disorders are of a highly demanding nature and are unpleasant and difficult for the patient to perform, we hypothesized that behaviour therapists employ specific ways of coping with patients' resistance. We assumed, therefore, that it is possible to identify the characteristics of the patient-therapist interaction that contribute to the patients performing the necessary homework assignments, or that supply a necessary basis for their compliance with the therapist's views and directives.

Chapter 4 presents an overview of the literature on characteristics of the patient-therapist interaction in behaviour therapy and their relationships with treatment outcome. We discuss one of the major problems in this area of research, namely that there is no theoretical process model in behaviour therapy that guides empirical research and provides the researcher with testable hypotheses. We argue that a process model which serves to explain the patient-therapist interaction in behaviour therapy might be developed from social-psychological literature on social power and persuasion (Heppner & Claiborn, 1989; Heppner & Dixon, 1981; Schaap et al., 1993; Strong & Claiborn, 1982; Strong & Matross, 1973).

In Chapters 5, 6, and 7 empirical studies are presented on the quality of the therapeutic relationship, patients' motivation, and patients' and therapists' interpersonal verbal behaviour. The questions we sought to answer were similar to those of Part 1 of the dissertation: Is it possible to identify early in treatment a number of process variables that separately or taken conjointly predict behavioural treatment outcome? If process variables associated with treatment success or failure in behaviour therapy can be identified, they can also be used to adjust the patient-therapist interaction in order to enhance treatment outcome.

PART I: PREDICTING OUTCOME IN THE BEHAVIOURAL TREATMENT OF PANIC DISORDER AND OBSESSIVE-COMPULSIVE DISORDER

Prognostic Factors in the Behavioural Treatment of Panic Disorder With and Without Agoraphobia[1]

Summary

Pretreatment and early treatment variables were evaluated as predictors of outcome for the behavioural treatment of panic disorder (PD) with and without agoraphobia. The following variables were examined: severity of agoraphobic complaints, catastrophic agoraphobic cognitions, level of depression, quality of the therapeutic relationship, motivation for treatment, personality psychopathology, and marital dissatisfaction. Sixty patients, diagnosed with PD, received a standardized exposure-based behavioural treatment programme. Severity of agoraphobic complaints, level of depression, motivation for treatment, personality psychopathology, and catastrophic agoraphobic cognitions were significantly related to treatment outcome, whereas the quality of the therapeutic relationship and marital dissatisfaction were not. Catastrophic agoraphobic cognitions were the strongest predictor of poorer outcome. Patients frequently distressed by maladaptive cognitions tended to improve less with an exposure-based treatment programme. Based on several predictors taken together, 75% to 85% of the patients were correctly classified as treatment failures or treatment successes for each of the outcome measures. A decision model based on multiple prognostic variables may lead to a reliable screening method of PD patients who are unlikely to improve. Treatment programmes can then be adapted for these patients.

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1 A somewhat revised version of this chapter has currently been accepted for publication in *Behavior Therapy*. Authors: G.P.J. Keijsers, C.A.L. Hoogduin, and C.P.D.R. Schaap.

Exposure treatment for Panic Disorder with Agoraphobia (PDA) has received substantial empirical support over the past twenty years (Jansson & Öst, 1982; Marks, 1987; Mattick, Andrews, Hadzi-Pavlovic, & Christensen, 1990; Michelson & Marchione, 1991). Also, for Panic Disorder (PD) patients without agoraphobia, exposure to interoceptive cues, such as dizziness and increased heartrate, is effective though controversy persists concerning whether its effects are attributable to extinction or to cognitive reinterpretations of bodily symptoms (Barlow, Craske, Cerny, & Klosko, 1989; Craske, Brown, & Barlow, 1991; Rapee, 1987). In an effort to improve treatment for PDA patients, researchers have investigated which patients fail to benefit from standard exposure treatment. They have sought to identify demographic, complaint-related, psychological, and social-psychological variables, measured at the onset of treatment, that could reliably predict treatment outcome. Empirically-established prognostic variables may lead to adjustments in existing treatment programmes that reduce the number of dropouts and treatment failures.

Fifteen years of empirical study on the treatment of PDA has not, however, revealed clear prognostic variables for behavioural treatment outcome (e.g., Chambless & Gracely, 1988; Emmelkamp & van der Hout, 1983; Jansson, Öst, & Jerremalm, 1987; Marks, 1987). Inconsistent findings have been reported for most postulated predictors. Several methodological issues may account for this:

- Different measurements of the prognostic variables have been used (e.g., different instruments, high-low codings vs. continuous measures).
- Different measurements of treatment outcome have been used (e.g., different instruments, clinically vs. statistically significant improvement, post vs. follow-up scores, raw endstate scores vs. raw gain or residual gain scores).
- Sample-bound, nonreplicable findings have emerged, due to too many prognostic variables and small sample sizes.
- The impact on treatment outcome of several prognostic variables taken together has been very little researched.

In the present study the predictive value of a limited number of variables was investigated, taken both separately and together: (1) initial severity of agoraphobic complaints, (2) catastrophic agoraphobic cognitions, (3) initial level of depression, (4) patients' personality psychopathology, (5) patient's initial motivation for treatment, (6) the quality of the therapeutic relationship, and (7) marital dissatisfaction. Research on these seven prognostic variables is briefly reviewed below. Several other prognostic variables that have been studied in relation to treatment outcome in PD patients (e.g., demographic variables, duration of complaints, and assertion level) were excluded from the present study because in the majority of studies they have failed to predict outcome (Chambless & Gracely, 1988; Jansson et al., 1987).

Significant negative associations with behavioural treatment outcome were found in eight studies that investigated the predictive value of *initial severity of*

agoraphobic complaints (de Beurs, 1993, Chambless & Gracely, 1988; Emmelkamp et al., 1992; Faravelli & Albanesi, 1987; Fischer et al., 1988; Hafner & Ross, 1983; Mavissakalian & Michelson, 1986; Stern & Marks, 1973). Significant correlations between pretreatment, posttreatment and follow-up agoraphobia scores were also found in the meta-analysis study of Trull, Nietzel and Main (1988). Nonsignificant associations with treatment outcome were found in four studies (Emmelkamp & van der Hout, 1983; Mathews, Johnston, Shaw, & Gelder, 1974; Munby & Johnston, 1980; Thomas-Peter, Jones, Sinnott, & Fordham, 1983), two of which had only a small patient sample size. In one study, a significant positive relationship between initial symptom severity and treatment outcome was found (Jansson et al., 1987), and another found that patients who dropped out had less severe initial symptom ratings than did completers (Barlow et al., 1989). According to Barlow et al., this finding may be due to a lack of motivation to comply with treatment or homework assignments. Similar findings were reported with obsessive-compulsive patients. Patients that dropped out of treatment had fewer pretreatment obsessive-compulsive complaints than patients that completed the treatment programme (Hansen, Hoogduin, Schaap, & de Haan, 1992).

Chambless and Gracely (1988) and de Beurs (1993) argue that a substantial proportion of the variance in posttreatment agoraphobia scores in PDA is attributable to individual differences in initial agoraphobic severity. Initial agoraphobic severity appears to be the strongest predictor of treatment outcome when it is indexed by raw agoraphobia scores at posttreatment (e.g., Albanesi & Faravelli, 1987). On the other hand, when treatment outcome is based on treatment gain scores (prescores minus postscores), the opposite is true (e.g., Jansson et al., 1987); i.e., patients with high initial agoraphobic severity report the largest complaint reduction at posttreatment. A third possibility is to base treatment outcome on residual gain scores (i.e., agoraphobia postscores minus the gain to be expected on the basis of the regression of prescore on postscore). This method was applied in several studies (e.g., de Beurs, 1993; Chambless & Gracely, 1988; Mathews et al., 1976; Thomas-Peter et al., 1983). Chambless and Gracely (1988), for example, calculated agoraphobia postscores adjusted for prescores. Initial severity of agoraphobia, indexed by another instrument, was nonsignificantly negatively correlated with treatment outcome. A shortcoming of this procedure, however, is that both instruments for assessing pretreatment agoraphobic severity tend to be highly correlated. The prognostic value of the second instrument is, therefore, likely to be suppressed.

Another methodological problem arises from the differing definitions of agoraphobic severity in PDA: In several studies, the severity of avoidance behaviours was assessed. Others assessed the amount of distress in phobic situations, the amount of general anxiety, or the number of symptoms presented by the patients. In addition, severity ratings were sometimes based on subjective patient evaluations, sometimes

on evaluations by independent assessors, and sometimes on behavioural tests. All in all, these methodological problems make it difficult to draw firm conclusions about the predictive value of initial severity of agoraphobic avoidance or initial severity of symptoms in relation to treatment outcome.

Catastrophic agoraphobic cognitions were related to treatment outcome in both Chambless and Gracely studies (1988). Whereas panic frequency and panic intensity are uncorrelated with treatment outcome in PD patients (Barlow et al., 1989; Chambless & Gracely, 1988; Faravelli & Albanesi, 1987; De Valck, Van den Bergh, & Van de Woestijne, 1992), fear of the effects of panic and panic anticipation are perhaps better predictors of treatment outcome.

Initial level of depression has frequently been associated with unfavourable treatment results in PD (Jansson & Öst, 1982; Jansson et al., 1987; Marks, 1987). Nevertheless, the empirical findings are far from consistent. In two studies that investigated initial level of depression and treatment outcome, significant negative associations were found (Watson, Mullet, & Pillay, 1973; Zitrin, Klein, & Woerner, 1980). The results of the former study were based on raw outcome scores. Mathews et al. (1974) reported a near-significant relationship between initial depression and treatment outcome. In six studies, nonsignificant associations were reported (Chambless & Gracely, 1988; Emmelkamp & van der Hout, 1983; Emmelkamp & Kuipers, 1979; Faravelli & Albanesi, 1987; Fischer et al., 1988). The sample size in the Emmelkamp and van der Hout study was small and Faravelli and Albanesi (1987) applied an uncontrolled naturalistic research design, for the most part with pharmacologic treatments. Again, it is too early to state with any degree of certainty that depressive complaints affect treatment outcome in PD. Depressive symptoms appear to be associated with anxiety complaints, and, therefore, will be affected by treatment, but whether depressed PD patients without a concomitant affective disorder diagnosis are less successfully treated for PD than non-depressed PD patients remains unclear.

Four studies have investigated the impact of *patients' personality psychopathology* on treatment outcome in PDA. In two of these (Green & Curtis, 1988; Reich, 1988), treatment was pharmacological; one (Chambless, Renneberg, Goldstein, & Gracely, 1992) used behavioural treatment, and one (Mavissakalian & Hamann, 1987) pharmacologic and behavioural treatment. These studies found significant negative relationships between personality psychopathology and treatment outcome or significant positive relationship with relapse rate following medication withdrawal. The total sum score of personality psychopathology (Mavissakalian & Hamann, 1987), multiple personality disorder diagnoses (Green & Curtis, 1988; Mavissakalian & Hamann, 1987), the dramatic cluster (Reich, 1988, but not Chambless et al., 1992), and Avoidant Personality Disorder (Chambless et al., 1992; Green & Curtis, 1988; Reich, 1988) may all have predictive value for treatment outcome in PDA.

In four studies the predictive value for treatment outcome of *patient's initial motivation for treatment* was investigated. In three of these, nonsignificant associations were found between treatment outcome and patient's motivation, as rated by the therapists (de Beurs, 1993; Mathews et al., 1974; 1976). Mathews et al. (1974; 1976) omitted specification of the instrument used. De Beurs (1993) used a 7-item rating scale. Keijsers, Hoogduin, and Schaap (1991a) used a 12-item questionnaire, completed by the patients at pretreatment. Though the underlying factors were nonsignificantly correlated with treatment outcome, half of the items of the motivation questionnaire were found so to be. Unfortunately, the sample consisted of a heterogeneous group of anxiety disorder patients. There is, therefore, no clear empirical evidence that motivation for treatment predicts treatment outcome in PD.

The *quality of the therapeutic relationship* appears to be a potent predictor of treatment outcome. In two studies the quality of the therapeutic relationship, assessed at posttreatment, significantly correlated with treatment outcome (Emmelkamp & van der Hout, 1983; Rabavilas, Boulougouris, & Perisaki, 1979). The causal relationships in these two studies are, however, unclear: Treatment results may well have affected the perceived quality of the therapeutic relationship. In seven studies the quality of the therapeutic relationship was assessed in early treatment. Five studies found a significant, positive relationship with behavioural treatment outcome in PDA (Bennun & Schindler, 1988; Keijsers, Schaap, Hoogduin, & Peters, 1991b; Keijsers, Schaap, Hoogduin, & Lammers, 1994; J. Margraf & S. Schneider, cited in: Margraf, Barlow, Clark, & Telch, 1993; Williams & Chambless, 1990). Two studies reported a nonsignificant relationship (de Beurs, 1993; Gustavson, Jansson, Jerremalm, & Öst, 1985). In the latter study, the nonsignificant finding may be attributable to a lack of statistical power, because many variables and few subjects were included. It appears that the quality of the therapeutic relationship is a potential predictor of behavioural treatment outcome, though the association appears moderate.

Marital dissatisfaction is the most studied prognostic variable in the behavioural treatment of PDA. Jansson et al. (1987) reviewed nine studies, only two of which reported significant relationships between marital satisfaction and immediate treatment outcome. On the other hand, in three out of six studies providing follow-up data, significant negative relationships with marital dissatisfaction were found. Jansson et al. (1987) found marital dissatisfaction to be significantly related to immediate outcome, but not to follow-up ratings, however. In two recent studies, one of them including follow-up ratings, again nonsignificant relationships between marital dissatisfaction and treatment outcome were found (de Beurs, 1993; Emmelkamp et al., 1992). It appears, therefore, that marital dissatisfaction in PD does not affect immediate treatment outcome, whereas its relationship to long-term outcome is unclear.

In the present study, we investigated whether treatment outcome could reliably be predicted by the seven prognostic variables described above, taken both separately and together. In addition, we expected that patients' initial severity of complaints would best predict outcome.

Method

Patients

The patients were referrals to a university outpatient clinic, specializing in the treatment of anxiety disorders. Seventy-two patients who met the DSM-III-R (American Psychiatric Association, 1987) criteria for PDA and PD without agoraphobia were asked to participate. Exclusion criteria were major depressive disorder, obsessive-compulsive disorder, schizophrenia, organic mental syndrome, psychoactive substance or alcohol dependence, or mental retardation. Three patients refused to participate, and nine others dropped out during treatment, because of pregnancy (n = 2), dissatisfaction with their therapist (n = 2), or dissatisfaction with treatment (n = 5). Of these five patients, two preferred drug treatment, two refused interoceptive exposure, and one preferred insight-oriented psychotherapy.

	n	%		n	%
Total Sample	60		Females	44	73.3
With Agoraphobia	53	88.3	Males	16	26.7
Without Agoraphobia	7	11.7	Married/Living Together	44	73.3
Antidepressant Drugs	12	20.0	Not Married/Living T.	16	26.7
Duration of Complaints:			Education/Occupation:		
- less than 1 year	9	16.7	- lower	25	41.7
- between 1 and 2 years	7	11.7	- middle	17	28.3
- between 2 and 5 years	17	28.4	- higher	12	20.0
- more than 5 years	26	43.2	- university	6	10.0

Table 1 Diagnosis and demographic characteristics of the patients.

Sixty patients completed the programme. Fifty-three (88.3%) patients were diagnosed with PDA, seven patients (11,7%) were diagnosed with PD without agoraphobia. Twelve patients (20%) were taking antidepressant drugs at the time of referral, and their medication remained unchanged during the study. The sample ranged in age from 18 to 59 years (M = 35.5, SD = 9.0). Table 1 shows additional patient demographic characteristics.

Therapists

The therapists were 15 female graduate students in clinical psychology who had been trained in the treatment of anxiety disorders. Treatment was supervised by an experienced clinical psychologist and a psychiatrist, both behaviour therapists.

Treatment

The patients received a standardized behavioural treatment programme of 12 50-minute sessions that comprised (1) two sessions of relaxation training, (2) two sessions of interoceptive exposure and stress-management, and (3) eight sessions of gradual exposure in vivo. The treatment programme was conducted according to a detailed treatment protocol. Following the 12 sessions, the exposure programme was continued for those patients (n = 48) that needed additional treatment (additional sessions: M = 4.79, SD = 2.80).

Instruments

treatment outcome: Treatment outcome was based on three main characteristics of the PDA syndrome: (1) agoraphobic avoidance, (2) frequency of physical panic symptoms, and (3) frequency of panic attacks. Agoraphobic avoidance was assessed for patients diagnosed with PDA only. Several additional symptoms were also assessed: catastrophic agoraphobic cognitions, level of depression, and general anxiety.

Agoraphobic avoidance was assessed with the Dutch translation of the Mobility Inventory (MI; Chambless, Caputo, Jasin, Gracely, & Williams, 1985). The MI consists of 25 situations typically avoided or endured with severe distress by agoraphobics (e.g., crowded places, shops). Patients rate their degree of avoidance on a five-point scale, both when accompanied by others (MI-AAC) and when alone (MI-AAL). The last part of the MI contains a definition of panic attacks, followed by a question about the number of *panic attacks* that have occurred during the past seven days (MI-PF). The MI-AAC and the MI-AAL, and also the Dutch translations of both instruments, have good test-retest reliability (r ranges from .70 to .90), high internal consistency (Cronbach's α ranges from .91 to .97), and reasonable concurrent validity (de Beurs, 1993; Chambless et al., 1985).

The frequency of *physical panic symptoms* was assessed with a self-report questionnaire, called the Nijmegen Hyperventilation List (NHL; van Doorn, Colla, & Folgering, 1983). This instrument consists of 16 items, describing physical sensations associated with the hyperventilation-syndrome (e.g., dyspnea, palpitations, derealization). The content of the items resembles the 17-item Body Sensations Questionnaire, developed by Chambless, Caputo, Bright, and Gallagher (1984). The patients rate the frequency with which the symptoms occurred over the past seven

days, ranging from "did not occur" to "occurred very often" on a five-point scale. The NHL has good test-retest reliability (r = .87), though the interitem correlations (r ranges from .03 to .52) were moderate, indicating that physical panic symptoms do not have a uniform pattern (van Doorn et al., 1983).

Catastrophic agoraphobic cognitions were assessed with the Dutch translation of the Agoraphobic Cognitions Questionnaire (ACQ; Chambless et al., 1984). This questionnaire contains 14 catastrophic thoughts such as "having a heart attack" or "losing control." Patients rate the frequency of being troubled by these thoughts when they are anxious on a five-point scale. Internal consistency (Cronbach's α ranging from .72 to .84) and test-retest reliability (r ranging from .71 to .80) of the Dutch translation of the ACQ are good (de Beurs, 1993).

Level of depression and *general anxiety* were rated by independent assessors who used the Hamilton Anxiety and the Hamilton Depression Rating Scale (HDS, HAS; Bech, Kastrup, & Rafaelsen, 1986).

predictors of outcome: Pretreatment assessments of catastrophic agoraphobic cognitions and level of depression also served as predictors of treatment outcome. In addition, the following predictors were included: quality of the therapeutic relationship, initial motivation for treatment, patients' personality psychopathology, and marital dissatisfaction.

The *quality of the therapeutic relationship* was assessed with four subscales of the Dutch adaptation of the Relationship Inventory (RI; Barrett-Lennard, 1962; Lietaer, 1976). According to Lietaer, these four subscales, empathy, positive regard, incongruence, and negative regard, together serve as an indication of the Rogerian concept of a facilitative therapeutic relationship. The quality of the therapeutic relationship was evaluated by the patients (RI-patient) and by the therapists (RI-therapist).

Motivation for treatment was assessed with the Nijmegen Motivation List (NML: Keijsers et al., 1991a), a questionnaire consisting of 12 items, considered to be indicative of patient's motivation for treatment. The NML includes three factors, (a) willingness to participate, (b) level of distress, and (c) pressure from others. Only willingness to participate (NML-participation) was tested as a prognostic variable in the present study. This factor contains six items (willingness to cooperate with treatment, willingness to make sacrifices, willingness to keep appointments, viewing complaints as somatic in nature, patient's perseverance, and their faith in treatment). Cronbach's α was .53. No other data on the psychometric qualities of the NML are currently available.

Personality psychopathology was measured with the Dutch version of the Personality Diagnostic Questionnaire Revised (PDQ-R; Ouwersloot, van den Brink, de Boer, & Hoogduin, 1989). This questionnaire consists of 133 true/false items and

closely resembles the PDQ-R developed by Hyler and colleagues (Hyler et al., 1983, 1989). Internal consistency of the personality disorders ranged from .56 to .83, though the agreement with clinical personality disorder diagnosis was low (Hyler et al., 1989). The total dimensional PDQ-R score was tested as a prognostic variable in the present study. No data on the psychometric qualities of the Dutch version of the PDQ-R are presently available.

Marital dissatisfaction was assessed with the Interactional Problem Solving Inventory (IPSI; Lange, Markus, Hageman, & Hanewald, 1991). The IPSI has been developed, validated, and standardized in the Netherlands, and consists of 17 items that assess the degree to which couples are able to solve their interpersonal problems and to communicate with each other. Internal consistency (Cronbach's α) was .86 for males and .88 for females. The correlation of this questionnaire with the Dyadic Adjustment Scale, and with Miller's Satisfaction Questionnaire is substantial (Lange, 1983).

In order to control for life events in the present study, we developed a short Life Events (LE) checklist. The checklist contains eight descriptions of major life events (e.g., bereavement in the family or of close friends, severe sickness, severe occupational or financial problems) and one item for additional life events. The number of life events over the past 12 months are scored.

Several other instruments were used in the study, such as the Scale for Interpersonal Behaviour (SIG: Arrindell & Van der Ende, 1985) which measures the patients' distress in social situations, and the Dutch version of the SCL-90 (Arrindell & Ettema, 1986).

Procedure

Upon referral, an intake session with an experienced psychotherapist took place. The patients were given detailed information about the research study and were asked to complete the NML. Two weeks later, Assessment 1 was conducted. During Assessment 1, independent assessors confirmed the patients' diagnoses with the Anxiety Disorders Interview Schedule Revised (ADIS-R: Dutch version: de Ruiter, Garssen, Rijken, & Kraaimaat, 1987) and rated the patients' life events with the LE. The patients completed the MI, NHL, ACQ, PDQ-R, and the IPSI.

Following Assessment 1, patients were assigned to one of the therapists and received a standardized treatment programme of 12 sessions. At the end of the third session, the patients and therapists completed the RI. To reduce the likelihood of social desirability responses, we instructed patients to put the completed questionnaire in an envelope and to seal it. They were assured that their therapists would not be informed of their scores on the questionnaire. Following the twelfth session, Assessment 2 was conducted. Patients completed the MI, ACQ, and the IPSI. Assessment 3 was conducted two months after Assessment 2, and the MI, ACQ,

NHL, IPSI, and LE were completed. At each assessment, the assessors rated the patients' level of depression and general anxiety using the HDS and the HAS. Interagreement between the raters was checked repeatedly during the training and yielded on average a kappa of 0.81[2] for the HDS, and 0.75 for the HAS.

Results

Table 2 presents an overview of test results at Assessment 1, 2, and 3. A repeated measures design was used to investigate whether there had been significant improvements during treatment.

	Assessment 1		Assessment 2		Assessment 3				
	M	SD	M	SD	M	SD	F[a]	df	ES[e]
MI-AAL[b]	2.75	.92	2.51	.87	2.30	.93	13.47[c]	2	.99
MI-AAC[b]	2.09	.74	1.79	.66	1.72	.66	10.87[c]	2	.92
MI-PF	1.90	2.17	.72	1.37	.42	1.06	32.60[d]	2	.91
NHL	28.52	10.29			20.12	9.48	50.58	1	1.31
ACQ	1.86	.54	1.70	.58	1.62	.53	10.90[c]	2	.81
HDS	11.48	6.18	8.73	6.06	8.36	5.63	7.15[c]	2	.68
HAS	17.93	7.73	11.80	7.17	12.45	8.17	15.95	2	.92

Table 2 Means and standard deviations of test scores at Assessments 1, 2, and 3, repeated measures tests *F*-statistic across all three assessments, and effect size, $N = 60$. Notes: MI-AAL = Mobility Inventory-Alone; MI-AAC = Mobility Inventory-Accompanied; MI-PF = Mobility Inventory-Frequency of Panic attacks; NHL = Nijmegen Hyperventilation List; ACQ = Agoraphobic Cognitions Questionnaire; HDS = Hamilton Depression Rating Scale; HAS = Hamilton Anxiety Rating Scale. (a) = All *F*-values were significant at .01 level. (b) = $n = 53$. (c) = The Mauchley sphericity test yielded a significant result, the exact *F*-statistic of Wilks's *lambda* was used. (d) = Because the MI-PF data were skewed, Cochran's *Q* for dichotomous variables (0 = no panic attacks, 1 = one or more panic attacks) was used. *Q* was significant at .001 level. (e) = Cohen d for dependent measures.

Agoraphobic avoidance behaviour (MI-AAL and MI-AAC), frequency of panic attacks (MI-PF), physical panic symptoms (NHL), catastrophic agoraphobic cognitions (ACQ), level of depression (HDS), and general anxiety (HAS) all were reduced significantly ($ps < .01$). Patients also reported nonsignificant improvement in their marital relationship during treatment (IPSI; $F(2) = .96$, $p = .18$). Agoraphobic

2 Interrater agreement was calculated with the computer program AGREE (Popping, 1984). All other calculations were carried out with SPSSX (1990).

avoidance when alone, agoraphobic avoidance when accompanied, frequency of panic attacks, and physical panic symptoms were the main treatment outcome variables. Because the patients varied with respect to the number of sessions they had received at assessment 3, we first investigated whether the number of sessions affected outcome at Assessment 3. We conducted Kendall *tau*-b correlations. The number of sessions were nonsignificantly correlated with agoraphobic avoidance (when alone: $r = .16$, $p = .09$; when accompanied: $r = .17$, $p = .06$), frequency of panic attacks ($r = .09$, $p = .40$), and physical panic symptoms ($r = .16$, $p = .08$).

Second, we investigated whether there were (1) differences between patients with and without antidepressant drugs, and (2) differences between patients with and without a major life event during treatment for agoraphobic avoidance, frequency of panic attacks, and physical panic symptoms across Assessments 1, 2, and 3.

There were no significant main effects or interaction effects for life events, $ps \geq .05$. There was, however, a significant main effect for antidepressant drug use: Medicated PDA patients reported significantly more agoraphobic avoidance behaviour when alone, F (1) = 7.82, $p < .01$. Because the Drugs x Treatment interaction effect was nonsignificant, F (2) = .36, $p = .70$, there is no reason to believe that medicated PDA patients improved less during treatment than unmedicated PDA patients. The remaining main effects and interaction effects for antidepressant drug use were all nonsignificant ($ps \geq .05$).

We next conducted linear regression analyses for each of four outcome variables to (1) predict Assessment 3 ratings by Assessment 1 ratings, and to (2) obtain residual gain scores that are independent of preassessment. Linear regression analysis revealed highly significant findings for agoraphobic avoidance (when alone: $R = .76$, $F = 70.21$, $p < .01$; when accompanied: $R = .67$, $F = 40.71$, $p < .01$), and for physical panic symptoms ($R = .58$, $F = 27.78$, $p < .01$). The percentages of Assessment 3 variance accounted for by assessment 1 ratings were 58% for agoraphobic avoidance when alone, 44% for agoraphobic avoidance when accompanied, and 33% for physical panic symptoms. Frequency of panic attacks at Assessment 3, however, could not significantly be predicted by Assessment 1 panic frequency ($R = .10$, $F = .57$, $p = .45$; Kendall *tau*-b = .10, $p = .38$).

The residual gain scores of agoraphobic avoidance and physical panic symptoms were correlated with the prognostic variables. Because Assessment 1 and Assessment 3 panic frequency were uncorrelated, no residual gain scores were computed. Instead, the frequency of panic attacks of Assessment 3 was used. Table 3 presents an overview of the correlations. The picture is fairly consistent: the quality of the therapeutic relationship (RI-patient, RI-therapist), and marital dissatisfaction did not correlate significantly with outcome scores. Catastrophic agoraphobic cognitions correlated significantly with all outcome scores, indicating that patients suffering

from catastrophic agoraphobic cognitions at the beginning of treatment tended to report more complaints at Assessment 3. Further, patient's motivation correlated significantly with all outcome scores, indicating that patients who were ambivalent about their participation in treatment tended to report more complaints at Assessment 3. Level of depression correlated significantly with frequency of panic attacks and physical panic symptoms, indicating that patients reporting depressive symptoms prior to treatment tended to have more panic attacks and more physical panic symptoms at Assessment 3. Personality psychopathology correlated significantly with agoraphobic avoidance when accompanied and to physical panic symptoms, and correlated nearly significantly with agoraphobic avoidance when alone. Personality psychopathology, therefore, appears to predict a less favourable treatment outcome.

Prognostic Variables	MI-AAL[a]	MI-AAC[a]	MI-PF[b]	NHL[b]
ACQ	.24*	.35**	.36**	.34**
HDS	.13	.11	.21*	.19*
RI-patient	.01	.12	.06	-.06
RI-therapist	.10	.13	.17	.10
NML-participation	-.20*	-.20*	-.21*	-.24**
PDQ-R	.17	.24*	.28**	.17
IPSI[c]	-.09	.05	.06	.04

Table 3 Kendall *tau*-b correlations (two-tailed) of residual gain scores for MI-AAL, MI-AAC, and NHL, and MI-PF at Assessment 3 with prognostic variables. Notes: MI-AAL = Mobility Inventory-Alone; MI-AAC = Mobility Inventory-Accompanied; MI-PF = Mobility Inventory-Frequency of Panic attacks; NHL = Nijmegen Hyperventilation List; ACQ = Agoraphobic Cognitions Questionnaire; HDS = Hamilton Depression Scale; RI = Relationship Inventory; NML = Nijmegen Motivation Questionnaire; PDQ-R = Personality Disorders Questionnaire Revised; IPSI = Interactional Problem Solving Inventory. * = $p < .05$; ** = $p < .01$. (a) = $n = 53$. (b) = $n = 60$. (c) = $n = 44$.

The last step was to conduct multivariate analyses. An improvement percentage was calculated for each of the outcome variables. The following formula was used: (Assessment 1 - Assessment 3) / (Assessment 1 - z) X 100%, where z is the minimum score on the instrument minus .001, to prevent a zero denominator in the formula. An improvement score of less than or equal to 30% indicated treatment failure, whereas an improvement score higher than 30% indicated treatment success. Considering the conceptual similarity of agoraphobic avoidance when alone and agoraphobic avoidance when accompanied, their predictable intercorrelations in the present study (Assessment 1: $r = .75$; Assessment 2: $r = .71$; Assessment 3: $r = .76$), and their high intercorrelations found in a recent study (de Beurs, 1993) using the Dutch version of the MI, the scores of both MI subscales were averaged to yield a

score for agoraphobic avoidance (MI-A). The MI-A improvement score was calculated as described above. No improvement percentage was calculated for panic frequency. Patients reporting one or more panic attacks at Assessment 3, were considered treatment failures, whereas patients without panic attacks at Assessment 3 were considered treatment successes.

Twenty-five of the 53 PDA patients were treatment failures, according to the improvement score for agoraphobic avoidance; 12 of the 60 PD patients were treatment failures, according to the criterion for panic attacks, and 33 of the 60 PD patients were treatment failures, according to the improvement score for physical panic symptoms. The correspondence of treatment successes vs. treatment failures between the agoraphobic avoidance improvement score, the criterion for panic attacks, and the improvement score for physical panic symptoms was significant though moderate (Cohen's *kappa* = .34, $p < .01$), indicating, for example, that patients who improved more than 30% on agoraphobic avoidance, did not necessarily report any panic attacks anymore at Assessment 3.

Backward discriminant analyses were undertaken to investigate the posterior probabilities of correctly classifying the patients to the success or failure group for agoraphobic avoidance, frequency of panic attacks, and physical panic symptoms. The prognostic variables catastrophic agoraphobic cognitions, level of depression, quality of the therapeutic relationship assessed by the patients (RI-patient) and assessed by the therapists (RI-therapist), patient's motivation, and personality psychopathology were entered as independent variables in each of the three discriminant analyses. The seventh prognostic variable, marital dissatisfaction, was omitted because of incomplete data on 16 patients who were either unmarried or not living with a partner.

agoraphobic avoidance: Level of depression, RI-therapist, and personality psychopathology were removed from the backward discriminant analysis. Treatment successes and treatment failures could significantly be discriminated by the remaining three prognostic variables: catastrophic agoraphobic cognitions, RI-patient, and patient's motivation (Wilks's *lambda* (3) = .70, $p < .01$). The canonical correlation coefficient was .54. 75.5% of the patients had been classified correctly to the success or the failure group. Eight (32.0%) of the patients in the failure group had been incorrectly classified as treatment successes, and five (17.9%) of the patients in the success group had been incorrectly classified as treatment failures. Unexpectedly, RI-patient related positively to the discriminant function, indicating that patients who were more satisfied with the therapeutic relationship had been classified to the failure group.

panic attacks: RI-therapist and personality psychopathology were removed from the backward discriminant analysis. Treatment successes and treatment failures could significantly be discriminated by the remaining four prognostic variables: catastrophic

agoraphobic cognitions, level of depression, RI-patient, and patient's motivation (Wilks's *lambda* (4) = 0.68, $p < .01$). The canonical correlation coefficient was .59. Though the group sizes of the success and failure groups differed considerably, the covariance matrices were homogenous (Box's test; F (10) = .72, $p = .46$). The pooled within-groups correlation for catastrophic agoraphobic cognitions was .85, indicating a strong relationship between agoraphobic cognitions and the discriminant function. 85% of the patients had been classified correctly. Six (50%) of the patients in the failure group had been incorrectly classified as treatment successes, and three (6.4%) of the patients in the success group had been incorrectly classified as treatment failures. Again, RI-patient related positively to the discriminant function, indicating that patients who were more satisfied with the therapeutic relationship had been classified to the failure group.

physical panic symptoms: RI-patient and RI-therapist were removed from the backward discriminant analysis. Treatment successes and treatment failures could significantly be discriminated by the remaining four prognostic variables: catastrophic agoraphobic cognitions, level of depression, patient's motivation, and personality psychopathology (Wilks's *lambda* (4) = .65, $p < .01$). The canonical correlation coefficient was .59. 75% of the patients had been classified correctly to the success or the failure group. Ten (30.3%) of the patients in the failure group had been incorrectly classified as treatment successes, and five (18.5%) of the patients in the success group had been incorrectly classified as treatment failures.

Because the above analyses for frequency of panic attacks and physical panic symptoms included data of PD patients with and without agoraphobia, analyses involving these two outcome variables were run again, with PDA patients only. Backward discriminant analyses produced the same prognostic variables that were found to discriminate significantly between treatment successes and treatment failures when all patients were included. Classification accuracy was somewhat reduced for frequency of panic attacks (83%), and increased for physical panic symptoms (81%). Excluding PD patients without agoraphobia, did not produce different correlations between the separate prognostic variables and frequency of panic attacks or physical panic symptoms at Assessment 3.

Overall, 23 PD patients in one of three failure groups had been incorrectly classified as treatment successes. Differences between these 23 nonresponders and the remainder of the patients were investigated in terms of age, gender, the use of antidepressant drugs, duration of symptoms and education. Similarly, differences between the 12 responders, incorrectly classified as treatment failures, and the remainder of the patients were investigated. The eight nonresponders on the agoraphobic avoidance improvement score, incorrectly classified as treatment successes, tended to have a longer duration of complaints (t (12.47) = 2.36, $p < .05$) than the remainder of the patients. The 12 responders, incorrectly classified as

treatment failures on one or more of three outcome measures, tended to be more highly educated (t (14.73) = 2.20, $p < .05$). Age, gender, and the use of antidepressants were unrelated to classification accuracy.

Discussion

Improvement

Though the patients significantly improved on all measures, the effect sizes are low compared with other behavioural treatment studies with PDA patients. Mattick et al. (1990) conducted a meta-analysis on 40 studies with in vivo exposure. They found mean effect sizes of 1.7 for avoidance behaviour, and .96 for panic attacks.

The relative inexperience of the therapists may partially explain the modest effect sizes in the present study (Trull, Nietzel, & Main, 1988). In addition, the MI-AAL and the MI-AAC are somewhat less sensitive to therapeutic change than most other agoraphobic avoidance ratings because they assess a broad range of agoraphobic avoidance situations (Chambless et al., 1985). Lastly, the effect sizes may have been suppressed by the relatively high pretreatment variances of the outcome measures because severely disturbed PD patients as well as mildly disturbed PD patients were included in the study.

Prognostic variables

The quality of the therapeutic relationship and marital dissatisfaction did not significantly predict treatment outcome in the univariate analyses. In the subsequent discriminant analysis, the patients' view of the therapeutic relationship, contributed significantly to the discriminant function for two of the three outcome measures, but in the inverse direction than was expected, that is, patients who were highly satisfied with their therapists had a greater chance of being classified as treatment failures. These findings deviate from the majority of studies addressing the impact of the therapeutic relationship in behavioural treatment reviewed in the introduction. We could detect no confounding patient variables that might explain this unexpected finding, save one: Patients with high RI scores reported more avoidance of social situations (SIG) than did patients with low RI-scores (t (33.60) = 2.01, $p < .05$). High RI scores, therefore, may be associated with the patients' problems in assertiveness, such as criticizing or the expression of negative emotions.

Consistent with previous studies (e.g., de Beurs, 1993; Keijsers et al., 1991b; Williams & Chambless, 1990), the RI ratings were highly positively skewed. Low ratings on the RI, therefore, do not indicate that patients or therapists felt highly dissatisfied with the therapeutic relationship, but rather that they were less satisfied. Furthermore, the limited variance and skewed responses on the RI may also be responsible for the meager associations with treatment outcome.

Marital dissatisfaction did not affect immediate outcome, consistent with the findings of most other studies (de Beurs, 1993; Bland & Hallam, 1981; Chambless & Gracely, 1988; Cobb, Mathews, Childs-Clark, & Blowers, 1984; Emmelkamp, 1980; Emmelkamp et al., 1992; Hafner & Ross, 1983; Himadi, Cerny, Barlow, Cohen, & O'Brien, 1986). The impact of marital dissatisfaction on follow-up ratings was, however, not investigated in the present study. Perhaps, marital dissatisfaction affects the maintenance of therapeutic changes that have been achieved during treatment and influences follow-up ratings rather than immediate treatment results (Emmelkamp & van der Hout, 1983; Jansson et al, 1987).

Catastrophic agoraphobic cognitions and patient's motivation for treatment related significantly to all outcome measures. Of the seven prognostic variables, catastrophic agoraphobic cognitions yielded the highest correlations with the residual gain scores. These findings were confirmed by subsequent discriminant analyses. The findings concur with those of Chambless and Gracely (1988), and underscore the importance of the fear-of-fear in PD patients. Patients who reported catastrophic thoughts associated with bodily anxiety symptoms tended to improve less in exposure-based behavioural treatment. For example, in discriminating between patients with and without panic attacks at Assessment 3, the ACQ yielded a pooled within-groups correlation of .85. Ten of the twelve patients reporting panic attacks at Assessment 3, had high initial ACQ-scores (ACQ $\geq$ 2.0). The present findings stress the importance of cognitive factors in the treatment of PD. They are in line with the current development of cognitive-behavioural treatment (Clark, 1986; Michelson & Marchione, 1991; Rapee, 1987). Exposure treatment results may be enhanced by additional cognitive techniques particularly for patients with a consistent pattern of catastrophic misinterpretations of certain bodily symptoms.

The results revealed that highly motivated patients improve more on all outcome measures. The results are at odds with previous null findings with PDA patients (de Beurs, 1993; Mathews et al., 1974, 1976) but agree with studies on obsessive-compulsive disorder (Hoogduin & Duivenvoorden, 1988) and anxiety disorders in general (Keijsers et al., 1991a). These inconsistent findings are most readily explained by varying definitions of patient's motivation for treatment. For the most part, patient's motivation is rated by the therapists or by independent raters. The NML is, to our knowledge, the only questionnaire on motivation for treatment used in behaviour therapy research that is completed by the patients. The findings of the present study indicate that patients' willingness to participate to treatment is of some importance in predicting treatment outcome. The NML is still, however, being validated and its psychometric properties have not yet been clearly established.

Initial level of depression predicted a higher frequency of panic attacks and physical panic symptoms, but did not predict agoraphobic avoidance behaviour. This inconsistent finding may be best explained by the frequently reported association

between depressive symptoms and anxiety symptoms (Chambless, 1985; Marks, 1987). Especially in regard to somatic symptoms, depression and anxiety appear to show considerable overlap. This overlap may produce unstable and inconsistent findings in regard to the predictive value of initial depression for treatment outcome in PD. The majority of studies indicate, however, that in PD patients without a concomitant affective disorder, the initial level of depression does not affect treatment outcome (Chambless & Gracely, 1988; Emmelkamp & van der Hout, 1983; Emmelkamp & Kuipers, 1979; Fischer et al., 1988).

Personality psychopathology was associated with higher agoraphobic avoidance when accompanied and higher frequency of panic attacks at the end of treatment. In the subsequent stepwise discriminant analyses, personality psychopathology substantially contributed to the discriminant function for physical panic symptoms only. These inconsistent findings may be explained by the intercorrelations between personality psychopathology and several other prognostic variables (e.g., catastrophic agoraphobic cognitions: $r = .40$, $p < .01$; level of depression: $r = .27$, $p < .05$). Personality psychopathology appears to partly reflect the ratings of these prognostic variables in regard to its predictive value for behavioural treatment outcome in PD. Its predictive value in isolation is not, therefore, demonstrated in the present study. Previous findings indicate that personality psychopathology is associated with a less favourable treatment outcome (Chambless et al., 1992; Green & Curtis, 1988; Mavissakalian & Hamann, 1987; Reich, 1988), but also suggest that ratings of personality psychopathology may merely reflect transitory dysfunctional states secondary to severe and distressing Axis I disorders (Mavissakalian & Hamann, 1987; Mavissakalian, Hamann, & Jones, 1990).

Finally, we found strong relationships between Assessment 1 and Assessment 3 for agoraphobic avoidance and physical panic symptoms. Similar findings have been reported by other authors, though conflicting results have been reported as well. In the introduction, we argued that in a number of studies, the nonsignificant relationships between pre- and posttreatment symptom severity may be due to the elimination of pretreatment symptom severity generally applied in the prediction of treatment outcome. Although we approve of this approach where prognostic variables other than initial symptom severity are under investigation, this statistical procedure inevitably leads to nonsignificant findings when treatment outcome is based on symptom severity. Using a second instrument as an independent prognostic measure of initial symptom severity does not solve the methodological difficulties. For example, we found correlations at Assessment 1 between the SCL-90 Agoraphobia subscale and MI-AAL and MI-AAC of .80 and .69 respectively. We would have been surprised to find significant correlations between the SCL-90 Agoraphobia subscale and MI-AAL or MI-AAC residual gain scores. Though the apparent relationships between initial symptom severity and treatment outcome may be uninteresting from a

theoretical point of view, they are certainly of clinical importance. There are no reasons to believe that patients with severe agoraphobic complaints fail to achieve substantially beneficial changes. Nonetheless, it has repeatedly been found that patients with severe agoraphobic complaints at the beginning of treatment tend to report more agoraphobic symptoms after a fixed treatment period relative to patients with mild initial agoraphobic complaints. The treatment of severely disturbed agoraphobic patients may take longer and the patients may not fully recover. It is important that these patients are properly informed of these possibilities.

In contrast to the findings relating to agoraphobic avoidance and frequency of physical panic symptoms, Assessment 1 and Assessment 3 panic frequency were uncorrelated. Similar results have been reported by other authors (Barlow et al., 1989; Chambless & Gracely, 1988; Faravelli & Albanesi, 1987; De Valck et al., 1992). The present study would seem to show that the majority of PD patients become panic free, irrespective of the number of panic attacks reported at the beginning of treatment.

General conclusions

It is unlikely that PD patients' failure to improve with behaviour therapy could have been caused by one disadvantageous prognostic variable without this variable having been identified in fifteen years of empirical research. What is more likely is that the chances of becoming a treatment failure increase dramatically when more than one disadvantageous prognostic variable is present. The aim of the present study was, therefore, to establish a reliable method of screening PD patients who fail to improve, based on several prognostic variables studied conjointly; and we partly succeeded. Between 75% and 85% of the patients could be correctly classified as successes or failures on the basis of each of three outcome measures. Nevertheless, it was impossible to draw conclusions about the patients who showed an overall improvement and those that did not, because treatment success or treatment failure according to each of these three outcome measures corresponded only moderately. The patients differed considerably with respect to the type and amount of symptom reduction they achieved during treatment, although on average all symptoms measured reduced significantly. This indicates that neither treatment nor prognostic variables may affect all treatment outcome measures in the same way for every patient. Therefore, rather than using a general treatment programme for PD, behaviour therapists should identify more specifically which symptoms (e.g., panic attacks, avoidance behaviour, catastrophic cognitions) to target for which patients.

Another issue concerns the patient sample of the present study. Both PD patients with agoraphobia and without agoraphobia were included, and, with the exception of agoraphobic avoidance ratings, their data were combined. The exclusion of PD patients without agoraphobia from the analyses did not influence the findings

reported here, but too few PD patients without agoraphobia participated in the study to analyze separately. We can, therefore, not state with certainty whether the prognostic variables affecting treatment outcome in PDA are the same as those in PD without agoraphobia.

Finally, we should like to raise three issues for future research. First, we believe that the predictive value of several variables should be studied in conjunction in order to develop a reliable decision model to differentiate patients who can readily be treated with a straightforward behavioural treatment programme from those who need adjusted treatment programmes.

Second, more research is needed into nonspecific treatment factors such as the quality of the therapeutic relationship and patient's motivation for treatment. Several problems associated with self-report questionnaires for the assessment of the quality of the therapeutic relationship have been discussed already. Other instruments, relying on audio or video recordings of patient-therapist interactions have been developed and some promising results in behaviour therapy have been reported (Schindler, 1988; Keijsers, Schaap, Hoogduin, & Lammers, 1994). Also, patient's motivation for treatment needs further investigation. The consistent findings of the present study for patients' willingness to participate suggest that the patients taking an active stance and complying with treatment may play an important role in the effectiveness of behavioural techniques. This willingness is a dynamic characteristic of the patients that can be influenced using specific therapeutic strategies (Schaap et al., 1993).

Lastly, patients' personality psychopathology may affect treatment results in behaviour therapy. More research is needed to distinguish between stable personality traits and transitory states secondary to a severe Axis 1 disorder. Furthermore, little is understood of the reasons why patients with an additional personality disorder fail to benefit from treatment. It is possible that in patients with an additional personality disorder, once again, the patients' active stance and compliance are crucial factors for a beneficial behavioural treatment outcome.

Predictors of Treatment Outcome in the Behavioural Treatment of Obsessive-Compulsive Disorder[1]

Summary

Exposure and response prevention have been demonstrated to be highly effective in the treatment of obsessive-compulsive disorder (OCD). Nevertheless, a considerable proportion of the patients that seek behavioural treatment refuse treatment, drop out, or fail to respond to treatment. The present study investigates which prognostic variables are associated with behavioural treatment failure in OCD. Empirically established prognostic variables measured at the start of treatment may lead to adjusted treatment programmes for patients liable not to improve. Forty patients, diagnosed with OCD were included in the present study. They received a standardized behavioural treatment programme of 18 sessions. Greater initial severity of OC complaints and depression predicted poorer outcome for compulsive behaviour. Greater initial severity of complaints and depression, longer problem duration, poorer motivation for treatment, and dissatisfaction with the therapeutic relationship predicted poorer outcome for obsessive fear. Predicting treatment success and treatment failure with the prognostic variables conjointly was possible for obsessive fear, but not for compulsive behaviour.

1 A somewhat shortened version of this chapter has currently been accepted for publication in *British Journal of Psychiatry*. Authors: G.P.J. Keijsers, C.A.L. Hoogduin, and C.P.D.R. Schaap.

The behavioural treatment of obsessive-compulsive disorder (OCD) has been a focus of a considerable body of research over the past 20 years. Though various techniques have been applied, exposure in vivo and response prevention have been demonstrated to be highly effective in numerous controlled studies and are considered the treatment of choice. The treatment techniques were originally applied in a clinical setting where intensive supervision was possible, but outpatients appear to equally benefit from self-controlled exposure and response prevention (Emmelkamp, 1982; Emmelkamp & Kraanen, 1977). Success rates between 60 to 85% are generally reported (e.g., Foa, Grayson, Steketee, Doppelt, Turner, & Latimer, 1983a; Foa & Steketee, 1979; Minichiello et al., 1988; Perse, 1988). Moreover, follow-up studies, ranging up to 4.5 years, have demonstrated that beneficial changes, once acquired, tend to be maintained after treatment termination (Emmelkamp & Rabbie, 1981; Marks, Hodgson, & Rachman, 1975; Mawson, Marks, & Ramm, 1982; Minichiello et al., 1988). Though these findings are impressive, they also indicate that 15% to 40% of the patients do not improve. Moreover, refusers and dropouts were generally not included in the above figures. Twelve percent (Marks, 1981) of OCD patients refuse to participate to treatment and another 12% (Foa, et al., 1983a; Marks, 1981) drop out during treatment. Therefore, only approximately 50% to 60% of OCD patients are actually helped by behaviour therapy.

Initiated by Boulougouris (1977), Foa (1979), Rachman and Hodgson (1980), and Marks (1981) a line of research has been developed that was directed towards the identification of patient and treatment factors that might affect outcome in the behavioural treatment of OCD. A reliable and early identification of prognostic variables associated with treatment failure or dropout may lead to adapting existing treatment programmes for those patients liable to drop out or to become treatment failures.

Reviewing the literature on prognostic variables in the behavioural treatment of OCD, however, makes it painfully clear that a systematic search for prognostic variables in the treatment of OCD did never really got started. For example, in 1979, Foa described two groups of four patients that did not respond to behaviour therapy. The first group was labelled as having *overvalued ideation*. These patients held the strong conviction that their compulsions were necessary in order to forestall future catastrophes. Though a large number of textbooks and review articles have referred to Foa's notion since then, the issue prospectively has been researched in only four studies. Moreover, in three of these four studies no significant association between fixity and bizarreness of obsessions and treatment outcome were found (Foa et al., 1983b; Hoogduin & Duivenvoorden, 1988; Lelliott, Noshirvani, Başoğlu, Marks, & Monteiro, 1988). Patients with bizarre and fixed obsessions responded as well to treatment as did patients whose obsessions were less bizarre and recognized as senseless. Only in one study it was found that fixity and bizarreness of obsessions

were associated with a poorer treatment outcome on several outcome measures (Başoğlu, Lax, Kasvikis, & Marks, 1988).

The second group of patients failing to respond to treatment described by Foa (1979), were patients that were severely depressed. OCD patients diagnosed with an concomitant depressive disorder are generally excluded from clinical OCD trials. Research on the prognostic value of *initial level of depression* of OCD patients without an concomitant depressive disorder, produced inconsistent results. In several studies negative associations between initial level of depression and treatment outcome have been reported (Foa et al., 1983a; Foa et al., 1983b; Rabavilas & Boulougouris, 1979). Emmelkamp & Rabbie (1981) found initial depression associated with immediate treatment outcome, but not with 4.5 year follow-up ratings. Others found nonsignificant associations between initial depression and behavioural treatment outcome (Başoğlu et al., 1988; Hoogduin & Duivenvoorden, 1988; Marks et al., 1988; Mawson et al., 1982). It is premature to conclude that OCD patients with depressive symptoms prior to treatment will improve less.

Another suggestion frequently encountered in behaviour therapy literature is that patients *without overt rituals* are more difficult to treat. Again, this suggestion has little empirical support. In 44 OCD patients, Akhtar, Wig, Varma, Pershad, and Verma (1975) found that the absence of compulsions was associated with a good prognosis. Kirk (1983), applying thought-stopping and imaginary desensitization and Hoogduin, de Haan, Schaap, & Arts (1987), applying satiation, found success percentages of respectively 81% and 72%. More recently, Salkovskis and Westbrook (1989) reviewed six prospective studies on patients with obsessions only. They concluded that the low improvement scores in these studies were attributable to an ineffective implementation of available behavioural treatment techniques.

In addition to these commonly mentioned prognostic factors, several other factors have been investigated with respect to their impact on behavioural treatment outcome in OCD. *Age* and *duration of the illness* do not appear to be associated with treatment outcome (Boulougouris, 1977; Başoğlu et al., 1988; Hoogduin & Hoogduin, 1984; Mawson et al., 1982; Marks, 1987), though Foa et al. (1983a) found a positive association between treatment outcome and early onset of symptoms, and age. Furthermore, Hoogduin and Duivenvoorden (1988) reported an additive effect of duration and severity of symptoms. Of 60 OCD patients, the patients with a short duration of complaints together with relatively mild symptoms all improved. Duration or initial severity of complaints as separate variables, however, were not associated with treatment outcome.

Initial severity of obsessive-compulsive complaints correlated negatively with outcome in one other study (Başoğlu et al., 1988). Others reported nonsignificant associations between initial severity of obsessive-compulsive complaints and outcome (Marks et al., 1975; Mawson et al., 1982; Foa et al., 1983a). *Initial anxiety* was

associated with poor treatment outcome in three studies (Emmelkamp, Hoekstra, & Visser, 1983; Foa et al., 1983a; Foa et al., 1983b), but not in three others (Başoğlu et al., 1988; Hoogduin & Duivenvoorden, 1988, Mawson et al., 1982). These inconsistent findings may be attributable to the differing ways outcome is defined. Especially when the prognostic variable closely relates to the dependent variable prescore, the researcher's choice for a particular outcome calculation will critically influence the obtained association between prognostic variable and outcome.

In addition to complaint-related and demographic variables, several nonspecific treatment variables have been considered to be prognostic treatment factors. Generally, *motivation for treatment* and *treatment compliance* have been considered important, if not a conditio sine qua non for treatment success in OCD (e.g., Jenike, 1990; Marks, 1981; Marks et al., 1988). Nevertheless, few empirical studies have addressed the issue. Motivation for treatment was found to be associated with treatment outcome in two studies (Hoogduin & Duivenvoorden, 1988; Keijsers et al., 1991a). The patient sample in the latter study, however, consisted of a heterogenous group of anxiety disorder patients. In a third study, motivation for treatment, rated by independent assessors on a three-point scale, was nonsignificantly associated with treatment outcome at posttreatment and at two-year follow-up (Mawson et al., 1982). Compliance rated by the therapists was associated with a variety of outcome measures in this study, but was, due perhaps to low compliance variance, nonsignificantly associated with outcome in another study (Lax, Başoğlu, & Marks, 1992).

The *quality of the therapeutic relationship*, was found to be associated with a more favourable treatment outcome in OCD in three studies (Arts, Hoogduin, Keijsers, Severeijns, and Schaap, 1994; Hoogduin, de Haan, and Schaap, 1989; Rabavilas, Boulougouris, & Perissaki, 1979) but not in a fourth study (Blaauw & Emmelkamp, 1991). The nonsignificant findings of the latter study, may be due to the poor statistical properties of the therapeutic relationship instrument used.

Lastly, several researchers considered *marital satisfaction* and *involvement of the spouse* in treatment to be important for treatment outcome. Although a frequently studied variable in the behavioural treatment of agoraphobia, marital satisfaction is rarely researched in connection with OCD patients. Emmelkamp, de Haan, and Hoogduin (1990) reported that, compared to a normal population, marital dissatisfaction is fairly common in OCD patients. In one controlled study it was found that spouse-aided behavioural treatment of OCD led to a more beneficial outcome at posttreatment but not at one-month follow-up (Emmelkamp & de Lange, 1983). Emmelkamp et al. (1990) found no significant differences in behavioural treatment outcome between the spouse-aided and nonspouse-aided treatment of 50 OCD patients.

In the present study, forty OCD patients were treated with exposure and response prevention. In a previous report we commented on the differential treatment effects when exposure in vivo and response prevention are offered separately to the

patients (Keijsers, Hoogduin, Schaap, de Jong, & de Koning, 1994). Since no treatment differences were found between exposure followed by response prevention (E-R group: n = 18) and response prevention followed by exposure (R-E group: n = 22), both patient samples were combined for present purposes. The predictive value on treatment outcome of the following variables were studied: (1) initial severity of compulsions, (2) initial level of obsessive fear, (3) initial level of depression, (4) the duration of obsessive-compulsive complaints, (5) initial motivation for treatment, (6) the quality of the therapeutic relationship, and (7) marital dissatisfaction.

Method

Patients

The patients were referrals to a university outpatient clinic, specializing in the treatment of anxiety disorders. Fifty-one patients, diagnosed as suffering from OCD according to DSM-III-R (American Psychiatric Association, 1987) criteria, were asked to participate. Exclusion criteria were major depressive disorder, schizophrenia, organic mental syndrome, psychoactive substance or alcohol dependence, or mental retardation. The patients were fully informed about the study. Four patients refused to participate because they were not willing to comply with the research schedule. Seven patients did not complete the treatment programme: Four of them required inpatient treatment, one improved substantially after four sessions, one did not show avoidance behaviour, and one suffered the persistent fear of losing self-control and committing suicide. This patient's admission to the exposure condition seemed unethical, so she was excluded from the study. Table 1 provides an overview of the demographic characteristics of the remaining patient sample.

Therapists

The therapists were nine junior psychologists who had been trained in the treatment of anxiety disorders. Treatment was supervised by a clinical psychologist and a psychiatrist, both behaviour therapists with extensive experience in the treatment of OCD.

Procedure

After the intake and Assessment 1, the patients first went through a pretreatment phase, consisting of two sessions. Thereafter, they were randomly assigned to the E-R or the R-E group. Both patient groups received eight 50-minute sessions gradual exposure in vivo over a one-month period, and eight sessions response prevention over a one-month period. Both treatment phases were separated by a two-week period of rest. The groups differed only with respect to the order in which both treatment phases were offered. The quality of the therapeutic relationship was

assessed at the end of the third session. Assessments 2 and 4 were made immediately before the start of the first, respectively the second treatment phase and Assessments 3 and 5 were made immediately after completion of the first, respectively the second treatment phase. The assessments were conducted by independent assessors, trained in the application of all the instruments used. Throughout the duration of the study, the assessors met for three hours once every three weeks in order to maintain consensus in the application of the Hamilton Rating Scales. For most patients, treatment was continued after termination of the research phase. The average number of sessions was 34.1 (*SD* = 14.7).

	n	%		n	%
Male	18	45	Checkers	21	53
Married	22	55	Washers	6	15
Antidepressant Drugs	11	27	Checkers & Washers	7	17
Age	34.8[a]	13.7[b]	Obsessions Only	6	15
Duration of Complaints	14.2[a]	9.9[b]			

Table 1 Demographic data of the patients, *N* = 40. Notes: (a) = mean. (b) = standard deviation.

Treatment

The patients were treated according to a detailed treatment protocol. In the pretreatment phase, the rationale of the treatment was explained to the patients, and information on the symptoms was collected. The information was classified as "response behaviour" or "avoidance behaviour". These were noted on "assignment cards". The patients were instructed to order the cards hierarchically, starting with the types of behaviour which were the easiest to influence.

response prevention: The types of behaviour that were not considered to be a part of "daily" life and that were performed explicitly to reduce feelings of anxiety and stress were regarded as "response behaviour". In each session, the patient and therapist agreed upon the assignment cards the patient would take home. The patients were asked to resist the urge to carry out the response behaviour noted on each assignment card. Problems in dealing with the assignment tasks were discussed. The consequences, in terms of unpleasant but beneficial activities that would follow immediately upon the performance of rituals already prohibited, were also agreed upon (e.g., Hoogduin & Hoogduin, 1984).

gradual exposure in vivo: The types of behaviour that were part of "daily" life, but were avoided by the patients in order to escape distressing stimuli, and thus leading to unwanted restrictions in every-day life, were regarded as "avoidance behaviour". Exposure was carried out in very much the same way as it was for

response prevention: Therapist and patients agreed upon the assignments the patients would engage in. In addition, satiation training was frequently given (e.g., Hoogduin et al., 1987; Rachman, 1976).

Instruments

treatment outcome: *Compulsive behaviour* was assessed using the Maudsley Obsessional Compulsive Inventory (MOCI: Rachman & Hodgson, 1980). The MOCI consists of 30 binary items that assess the presence of compulsive symptoms. Test-retest reliability (Kendall *tau*-b) of the Dutch translation of the MOCI is .84. Internal consistency (Cronbach's α) for three of the four subscales range from .67 to .79, but is low for the remaining subscale "compulsive slowness". The correlation with the Dutch adaptation of the Leyton Obsessional Inventory (Cooper, 1970; Kraaimaat & van Dam-Baggen, 1976) is .76. The instrument is less sensitive, however, as a measure of therapeutic change than the Anxiety-Discomfort Scale (Emmelkamp et al., 1990; Kraaijkamp, 1984).

Obsessive fear was measured using the Anxiety-Discomfort Scale: Five important distressing situations were selected at the first assessment. The patients were asked to rate their distress on an eight-point scale. During each assessment the assessor and the therapist also rated the patient's level of distress in these five situations. The mean score serves as a measure of obsessive fear. This measure, originally developed by Watson and Marks (1971), was adapted and given its present form by Emmelkamp (1982).

predictors of outcome: Compulsive behaviour, and obsessive fear prescores also served as predictors of treatment outcome. In addition, the following predictors were included: *Initial level of depression* was rated by independent assessors using the Hamilton Depression Rating Scale (HDS; Bech et al., 1986). Interrater agreement checks during the training yielded on average a *kappa* of 0.81[2].

Motivation for treatment was assessed with "the willingness to participate" subscale of the Nijmegen Motivation List (NML: Keijsers et al., 1991a). This subscale contains six items (willingness to cooperate with treatment, willingness to make sacrifices, willingness to keep appointments, viewing complaints as somatic in nature, patient's perseverance, and their faith in treatment). Cronbach's α is .53. No other data on the psychometric qualities of the NML are currently available.

The *quality of the therapeutic relationship* was assessed using four subscales of the Dutch adaptation of the Relationship Inventory (RI; Barrett-Lennard, 1962; Lietaer, 1976). According to Lietaer, these four subscales, empathy, positive regard, incongruence, and negative regard, together serve as an indication of the Rogerian

2 Interrater agreement was calculated with the computer programme AGREE (Popping, 1984). All other computations were carried out with SPSSX (1990).

concept of a facilitative therapeutic relationship. The quality of the therapeutic relationship was evaluated by the patients (RI-patient) and by the therapists (RI-therapist).

Marital dissatisfaction was assessed with the Interactional Problem Solving Inventory (IPSI; Lange et al., 1991). The IPSI has been developed, validated, and standardized in the Netherlands, and consists of 17 items that assess the degree to which couples are able to solve their interpersonal problems and to communicate with each other. Internal consistency is .86 for males and .88 for females. The correlation of this questionnaire with the Dyadic Adjustment Scale, and with Miller's Satisfaction Questionnaire is substantial (Lange, 1983).

Results

Table 2 presents an overview of the average ratings of compulsive behaviour and obsessive fear across Assessments 1 to 5. Repeated measures were carried out to investigate whether the patients improved across all assessments.

	Compulsive Behaviour		Obsessive Fear	
	M	SD	M	SD
Assessment 1	13.70	5.32	5.54	1.06
Assessment 2	13.42	5.86	5.12	1.12
Assessment 3	11.97	6.00	4.38	1.63
Assessment 4	11.40	6.22	4.17	1.71
Assessment 5	10.65	6.26	3.46	1.90

Table 2 Means and standard deviations of compulsive behaviour and obsessive fear at Assessments 1 to 5, $N = 40$.

This was the case. For compulsive behaviour (F (4) = 5.60, $p < .01$; F (1.39) = 18.88, $p < .01$) and for obsessive fear (F (4) = 14.28, $p < .01$; F (1.39) = 56.36, $p < .01$) there was a significant linear decline across Assessments 1 to 5. Effect sizes[3] at Assessment 5 were .85 for compulsive behaviour, and 1.76 for obsessive fear.

Investigations were then carried out to determine whether there were differences relating to compulsive behaviour and obsessive fear between patients taking antidepressant drugs and those not taking antidepressant drugs at pre- (Assessment 1) and postscore (Assessment 5). Repeated Measures were applied with "use of

3 Cohen d for dependent measures (Cohen, 1977).

antidepressant drugs" as the between subjects factor. There was a significant between subjects effect of antidepressant drugs on obsessive fear. Medicated patients reported less obsessive fear at Assessments 1 and 5 than did unmedicated patients (F (1) = 5.68, $p < .05$). Because the Antidepressant Drugs x Treatment interaction effect was nonsignificant (F (1) = 1.19, $p = .28$) there is no reason to assume that unmedicated patients improved less than medicated patients. All other main effects and interaction effects for compulsive behaviour and obsessive fear were nonsignificant at the .05 level of significance.

We next conducted linear regression analyses for each of both outcome variables in order to: (1) predict compulsive behaviour or obsessive fear postscores (Assessment 5) by their prescore (Assessment 1), and (2) to obtain residual gain scores, i.e., postscore minus the gain to be expected on the basis of the regression of prescore on postscore.

Linear regression analysis revealed significant findings for compulsive behaviour ($R = .62$, F (1) = 23.88, $p < .01$) and for obsessive fear ($R = .41$, F (1) = 7.80, $p < .01$). Thirty-nine percent of compulsive behaviour postscore variance can be accounted for by compulsive behaviour prescores, 17% of obsessive fear postscore variance can be accounted for by obsessive fear prescores. The residual gain scores for compulsive behaviour and obsessive fear were then correlated with the prognostic variables. Table 3 presents an overview of the correlations.

Prognostic Variables	Compulsive Behaviour	Obsessive Fear
HDS	.24*	.17
Duration of Complaints	.05	.24*
NML-participation	-.10	-.24*
RI-patient	-.03	-.24*
RI-therapist	.10	-.01
IPSI[a]	-.14	-.23

Table 3 Kendall *tau*-b correlations (two-tailed) of residual gain scores for compulsive behaviour and obsessive fear with prognostic variables, $N = 40$. Notes: HDS = Hamilton Depression Rating Scale; NML = Nijmegen Motivation Questionnaire; RI = Relationship Inventory; IPSI = Interactional Problem Solving Inventory. * = $p < .05$. (a) = $n = 26$.

Of the six prognostic variables, level of depression correlated significantly with compulsive behaviour residual gain scores, and duration of complaints, patient's motivation, and RI-patient correlated significantly with obsessive fear residual gain scores. RI-therapist and marital dissatisfaction correlated significantly with neither of two outcome measures. Since 14 patients were unmarried or not living with a partner, marital dissatisfaction ratings were available on only 26 patients.

The last step was to conduct multivariate analyses. An improvement score was calculated for each of the outcome variables. The following formula was used: (Assessment 1 - Assessment 5) / (Assessment 1 - .001) X 100%, where .001 prevents a zero denominator in the formula. Following Foa et al. (1983a), Emmelkamp and de Lange (1983), and Hoogduin and Duivenvoorden (1988) an improvement score of less than or equal to 30% indicated treatment failure, whereas an improvement score higher than 30% indicated treatment success. Backward discriminant analyses were undertaken to investigate the posterior probabilities of correctly classifying the patients to the success or failure group for compulsive behaviour and for obsessive fear. The prognostic variables level of depression, duration of complaints, patient's motivation, RI-patient, and RI-therapist were entered as independent variables in both discriminant analyses. The sixth independent variable, marital dissatisfaction, had to be excluded since the data was incomplete.

Based on the compulsive behaviour improvement score, 24 of 40 OCD patients were treatment failures and 16 were treatment successes. Duration of complaints, patient's motivation, RI-therapist, and RI-patient were removed from the backward discriminant analysis. Treatment successes and treatment failures could not be discriminated significantly by the remaining prognostic variable, level of depression (Wilks's *lambda* (1) = .95, p = .18).

Based on the obsessive fear improvement score, 17 of 40 OCD patients were treatment failures and 23 were treatment successes. RI-patient was removed from the backward discriminant analysis. Treatment successes and treatment failures could be discriminated significantly by the remaining four prognostic variables: level of depression, duration of complaints, patient's motivation, and RI-therapist (Wilks's *lambda* (4) = 0.74, $p < .05$). Eighty percent of the patients had been classified correctly to the success or the failure group. Five (29%) of the patients in the failure group had been incorrectly classified as treatment successes, and three (13%) of the patients in the success group had been incorrectly classified as treatment failures.

Discussion

In the present study, we investigated which prognostic variables substantially contributed to a posterior prediction of treatment success and treatment failure in OCD patients. At the end of 18 sessions behavioural treatment given over a period of 14 weeks, compulsive behaviour and obsessive fear had reduced significantly, though the effect size for compulsive behaviour was lower than for obsessive fear. This finding concurs with those of Emmelkamp et al. (1990) and Kraaijkamp (1984) who reported that the MOCI is less sensitive as a measure of therapeutic change than the Anxiety-Discomfort Scale.

Greater initial severity of OC complaints and initial depression predicted poorer outcome of compulsive behaviour. A significant differentiation between treatment successes and treatment failures for compulsive behaviour was, nevertheless, impossible. The relatively low sensitivity for therapeutic change of the MOCI may be accountable for this finding. Greater initial severity of OC complaints, higher level of depression, poorer motivation, dissatisfaction with the therapeutic relationship, and longer complaints duration predicted poorer outcome for obsessive fear. Eighty percent of the patients could correctly be classified as treatment successes or treatment failures by the combined variables level of depression, patient's motivation, RI-therapist, and duration of complaints. Below, we discuss the findings for each of the seven prognostic variables included in the study.

Greater initial severity of OC complaints predicted outcome for compulsive behaviour as well as for obsessive fear. These findings concur with those of Başoğlu et al. (1988) and Hoogduin and Duivenvoorden (1988) but disagree with those of Marks et al., 1975; Mawson et al. (1982) and Foa et al. (1983a). The inconsistency of these findings can be accounted for by the differing definitions of treatment outcome. The associations between initial severity ratings and treatment outcome tend to vary whenever treatment outcome is based on raw postscores, residual gain scores or prescores minus postscores (c.f., Keijsers, Hoogduin, & Schaap, 1994a). Furthermore, it is likely that initial severity is a stronger predictor of outcome at posttreatment, than at follow-up and that an association is found only when outcome is assessed after a fixed amount of treatment for all patients.

There are no reasons to believe that patients with severe OC complaints fail to achieve substantially beneficial changes. Nonetheless, it appears that patients with severe OC complaints at the beginning of treatment tend to report more OC symptoms after a fixed treatment period, than do patients with mild initial OC complaints (Marks, 1987). The treatment of severely disturbed OCD patients will simply take longer and the patients may not fully recover. It is important that these patients are properly informed of these possibilities.

Higher initial levels of depression predicting poorer outcome in OCD accords with the findings of several other studies (Emmelkamp & Rabbie, 1981; Foa et al., 1983a; Foa et al., 1983b; Rabavilas & Boulougouris, 1979). Nonsignificant associations between level of depression and treatment outcome have also been reported (Başoğlu et al., 1988; Hoogduin & Duivenvoorden, 1988; Marks et al., 1988; Mawson et al., 1982), though only in the study by Hoogduin and Duivenvoorden did all patients receive behavioural treatment without antidepressant drugs. It may be possible that the negative impact of initial depressive mood on treatment outcome is absent when the patients receive additional antidepressant drugs. This conclusion appears plausible, yet does not take into account the fact that marked improvements in depressive mood were also reported with exposure and response

prevention (Boersma, Den Hengst, Dekker, & Emmelkamp, 1976; Emmelkamp & Rabbie, 1981; Hoogduin & Duivenvoorden, 1988; Keijsers, Hoogduin, Schaap, de Jong, & de Koning, 1994).

Though duration of complaints has generally not been found to affect the behavioural treatment results of OCD patients, in the present study, a longer problem duration significantly predicted outcome for obsessive fear. In a previous study involving the same patient sample, we found that patients with a long (higher than the median value of 13 years) problem duration also reported more compulsive behaviour at posttreatment than did patients with a relatively short (equal to or lower than the median value) problem duration (Keijsers, Hoogduin, Schaap, de Jong, & de Koning, 1994). These findings indicate that a relatively long problem duration may be a negative prognostic factor for behavioural treatment in OCD.

Patient's motivation was significantly and positively associated with a reduction of obsessive fear in the univariate analysis, as well as in the discriminant analysis. These findings are in line with those of Hoogduin and Duivenvoorden (1988) and Keijsers et al. (1991a) and confirm the importance of patients' willingness to participate in the behavioural treatment of OCD. The NML is, however, still in an experimental phase and its psychometric properties have not yet been clearly established. The present findings, therefore, need further investigation.

The patients' evaluation of the therapeutic relationship correlated significantly and positively with a reduction of obsessive fear, but was, nevertheless, removed from the discriminant analysis. Both findings may be accounted for by a high correlation with duration of complaints (r = -.42) serving as mediating factor. It seems that older patients with a long history of complaints evaluated their relationship with the mostly young therapists as less satisfactory. The therapists' evaluation of the therapeutic relationship on the other hand, remained in the discriminant analysis, making a unique contribution to the differentiation between success and failure cases. This finding is in line with the results of a number of other studies. The therapeutic relationship apparently does play a role in the behavioural treatment outcome of OCD (Arts et al., 1994; Hoogduin et al., 1989; Rabavilas, Boulougouris, & Perissaki, 1979).

Lastly, marital dissatisfaction was not significantly correlated with treatment outcome in the present study, though had there been more married couples, several significant findings may have emerged. For the moment, however, there are no empirical findings to indicate the prognostic value of marital dissatisfaction in the behavioural treatment of OCD.

In conclusion, we found that the complaint-related variables initial severity, initial level of depression, and problem duration, and the nonspecific variables patient's motivation and quality of the therapeutic relationship affected behavioural treatment outcome in OCD, but a significant discrimination between treatment

successes and failures based on several prognostic variables was possible only for obsessive fear and not for compulsive behaviour. The importance of nonspecific treatment factors for outcome has also been found in the behavioural treatment of other anxiety disorders (Keijsers et al., 1994a).

Three additional notes concerning the above findings have to be made. Firstly, only immediate treatment effects have as yet, been investigated. Whether long-term treatment outcome can be predicted by the same prognostic variables as were found here, remains to be determined.

Secondly, given the small number of patients in the present study, a prior selection of prognostic variables had to be made. Of the prognostic variables not included here, a personality disorder diagnosis in addition to OCD may be of some importance, although, so far, empirical research has produced only conflicting results (Mavissakalian et al., 1990; Minichiello, Baer, & Jennike, 1987; Ravabilas, Boulougouris, Perissaki, & Stefanis, 1979; Steketee, 1990).

Thirdly, it is important to note that the obtained results of the discriminant analyses are preliminary and need cross-validation on an independent sample.

PART 2: THE IMPACT OF PROCESS VARIABLES ON THE BEHAVIOURAL TREATMENT OF ANXIETY DISORDERS

The Impact of Interpersonal Patient and Therapist Behaviour on Treatment Outcome in Behaviour Therapy: A Review of Empirical Studies

Summary

The therapeutic relationship and the patient-therapist interaction are largely neglected in behaviour therapy research. In the present chapter an attempt is made to clarify the role of the therapeutic relationship in behaviour therapy. Empirical studies are reviewed, the aim being to identify (I) characteristics of the patient-therapist interaction in behaviour therapy and (II) verbal therapist and patient behaviour that affect behavioural treatment outcome. The therapeutic relationship in behaviour therapy is characterized by a more active and directive stance on the part of the therapists and higher levels of emotional support than are found in person-oriented psychotherapies. In addition, behaviour therapists express high levels of empathy and unconditional positive regard similar to person-oriented psychotherapists. Three clusters of interpersonal verbal behaviour have been identified that are associated with behavioural treatment outcome: (1) the Rogerian therapist variables empathy, nonpossessive warmth, positive regard, and genuineness, (2) the patients' perception of the therapist being self-confident, skillful, and active, and (3) the cluster of patient's participation, motivation, and resistance. To explain the role of the therapeutic relationship in behaviour therapy the patient-therapist interaction is conceptualized as an interpersonal process by which the therapists obtain their power to be able to influence the patients by means of attempts at direct behavioural change.

Patients' inner exploration and insight are key constructs in most forms of person-oriented psychotherapies. To foster insight in the patients' inner needs, conflicts, and fears, the psychotherapists establish a particular relationship with their patients. Characteristic for this relationship is a nondirective and empathic stance of the therapist in combination with carefully timed interpretations and confrontations. Behaviour therapists, on the other hand, rejected the patients' detailed exploration of inner needs, conflicts, or fears as the patients' best route to change or relief. Instead, they looked for techniques to directly influence the symptoms and complaints presented by the patients. As a consequence, the therapeutic relationship in behaviour therapy was not experiential in nature, but evolved into a relationship between two people working together to work out the problems presented by the one, using solutions presented by the other. Though a supportive and warm therapeutic climate was generally endorsed by behaviour therapists, there was no need for theoretical elaborations upon the patient-therapist interaction. The therapeutic relationship became a neglected phenomenon within the field of behaviour therapy (Linehan, 1988; Sweet, 1984; Wilson & Evans, 1977).

Within the 'common therapeutic factors' climate of the seventies, however, empirical studies started to appear that suggested that the quality of the therapeutic relationship did affect behavioural treatment outcome. Aspects of the patient-therapist interaction appeared to affect the execution of behavioural techniques and to enhance treatment results, but had been taken for granted in behaviour therapy research up to that point (Linehan, 1988; Mitchell, Bozarth, & Krauft, 1977; Sweet, 1984; Wilson & Evans, 1977). Apparently, the therapeutic relationship in behaviour therapy also serves some function in the patients' process of achieving change. Which relationship variables and what aspects of the patient-therapist interaction enhance behavioural treatment results is unclear, however.

The aims of the review presented here were to identify (I) characteristics of the patient-therapist interaction in behaviour therapy and (II) verbal therapist and patient behaviour that affect behavioural treatment outcome. To accomplish this we reviewed empirical studies on the therapeutic relationship and patient-therapist interaction in behaviour therapy.

In the first part of the present chapter, empirical findings are presented and ordered in eight sections. Those relating to the verbal therapist behaviour are: (1) empathy, warmth, positive regard, and genuineness, (2) support, (3) expertness, directiveness, explanations, and advice, (4) interpretations and confrontations, (5) and self-disclosure; those relating to the verbal patient behaviour are: (6) self-disclosure and problem descriptions, (7) self-exploration, insight, and change reports, and (8) participation, motivation, and resistant behaviour. Because most of the research on patient-therapist interaction has been conducted outside the field of behaviour therapy, references to important findings and literature reviews of psychotherapy

research in general have regularly been added. In the second part of the chapter, general conclusions are drawn and a number of methodological issues are discussed.

Interpersonal Therapist Behaviour

Empathy, warmth, positive regard, and genuineness

Therapist behaviour has received far more attention than patient variables in studies on treatment outcome. The Rogerian therapist conditions particularly have been the focus of extensive study, making this one of the largest research areas in the field of clinical psychology. These treatment conditions - empathy, nonpossessive warmth, positive regard, and genuineness - were laid down by Rogers in his 1957 article as being necessary and sufficient for the achievement of patient change. Despite the attention they have received, the importance of the Rogerian therapist conditions for treatment outcome still remains controversial. Several reviewers conclude that due to methodological difficulties the findings are in general disappointing (Lambert, DeJulio, & Stein, 1978; Parloff, Waskow, & Wolfe, 1978). Others argue that there is substantial evidence in support of the importance of the Rogerian therapist conditions for treatment outcome (Gurman, 1977; Orlinsky & Howard, 1986; Patterson, 1984). In their extensive review, Orlinsky and Howard reported that significant positive relationships were found in 60% of 54 studies, focussing on the relationship between the Rogerian therapist conditions and treatment outcome. Empathy was significantly positively associated with treatment outcome in 48% of 56 studies. There was, however, a sharp difference in perspective: Empathy, rated by the patients, was found to be significantly associated with treatment outcome in 65% of the studies reviewed; rated by independent raters 52% of the findings were significant; and rated by the therapists (nine studies), none were significant. Emotional warmth was significantly associated with treatment outcome in 46% of 52 studies, and genuineness and treatment outcome were significantly associated in 35% of 40 studies. Also more significant results were found with regard to emotional warmth, and genuineness when they were evaluated by the patients than when they were evaluated by the therapists or by independent raters.

There are several important studies that demonstrate that behaviour therapists are highly involved in the development and maintenance of a good relationship with their patients. These will be discussed first, prior to a review of the empirical studies that investigated the Rogerian therapist conditions in regard to behavioural treatment outcome.

In three retrospective studies, the patients were asked what they felt had been the most helpful aspect of their behavioural treatment (Llewelyn & Hume, 1979; Ryan & Gizynski, 1971; Sloane, Staples, Whipple, & Cristol, 1977). All three studies found that the patients had found the relationship with their therapist more helpful than the

behavioural techniques that were employed during treatment. Ryan and Gizynski found that patients that liked their therapists more, reported higher improvement ratings. The incidence of behaviour modification techniques, on the other hand, was not associated with treatment outcome. Sloane et al. and Llewelyn and Hume furthermore found that behaviour therapy and psychotherapy patients were quite similar in their evaluation of their treatment and that both patient samples placed value on the same relationship variables.

In their retrospective study, Murphy, Cramer, and Lillie (1984) used a semi-structured interview to study the treatment factors that were considered as curative by 24 patients during their last stage of cognitive-behavioural treatment. "talking to someone interested in my problems", "talking to someone who understands", and "therapists' advice" were the most often mentioned by the patients. In addition, therapists "understanding" and "therapists' advice" were correlated with treatment outcome. Another retrospective study found that behaviour therapy patients rated their therapists significantly higher on the level of interpersonal skills, accurate empathy, and therapist self-congruence than did psychodynamic therapy patients (Sloane, Staples, Cristol, Yorkston, & Whipple, 1975).

Wogan and Norcross (1985) designed a questionnaire that contained a large variety of therapeutic techniques and skills. A large sample of psychotherapists of four different psychotherapeutic orientations were asked to indicate the frequency with which they currently employed each technique or skill. The therapists' responses differed in many respects. Behaviour therapists reported employing significantly more direct guidance, education, and structure than did psychodynamic, humanistic or eclectic therapists. They also used significantly fewer Rogerian techniques. Nevertheless, of the 13 clusters of different therapist techniques and skills included in the questionnaire, the Rogerian techniques attained the highest frequency ratings across all theoretical orientations, including behaviour therapy.

The actual verbal therapist behaviour of therapists of different orientations were investigated in four studies. In a study carried out by Stiles, Shapiro and Firth-Cozens (1988), 39 patients received two types of treatment offered consecutively and in random order. These were cognitive-behavioural (descriptive) and person-oriented (exploratory) treatment. Four audio-recorded sessions of each type of treatment were analyzed using a observation instrument. The therapists' verbal behaviour clearly differed between the two treatment methods (discussed below). However, in both types of treatment, the percentage of acknowledgements (i.e., "active listening") was the highest of all therapist behaviour modes making up 38% to 40% of all therapist utterances.

Brunink and Schroeder (1979) compared the therapist verbal behaviour of 18 gestalt, psychoanalytically oriented, and behaviour therapists. One of each therapist's treatment sessions beyond the third session was recorded on audiotape and coded

according to a classification system containing six verbal categories. The behaviour therapists provided significantly more supportive communications (reassurance, praise, and sympathy) than either the psychoanalytic or the gestalt therapists. They used more direct guidance than the psychoanalytic therapists, but less than the gestalt therapists, and received ratings similar to those of the psychoanalytic therapists for their communication of empathy. Comparable results were reported by Greenwald, Kornblith, Hersen, Bellack, and Himmelhoch (1981) and Raue, Castonguay, and Goldfried (1992). Greenwald et al. (1981) studied two behaviour therapists and two analysts in their treatment of 20 depressed female patients. Three-minute samples from Sessions 4 and 8 were analyzed. Results demonstrated that the behaviour therapists were more directive and structuring and showed more initiative in establishing a supportive climate than the analysts. Raue et al. (1992) compared the working alliance between 18 experienced cognitive-behavioural therapists and 13 experienced psychodynamic-interpersonal therapists. A single session from the middle of a course of therapy was rated using the Working Alliance Inventory-observation form (WAI-o). The behaviour therapists scored significantly higher on two of the three WAI-o subscales than the psychodynamic therapists. These were "the establishment and maintenance of a good collaborative relationship" and "the agreement between the therapist and patient on the therapeutic goals".

From these studies it can be deduced that behaviour therapists employ relationship skills as much as therapists from other orientations. The therapeutic relationship in behavioural treatment appears to be characterized by an active, directive stance on the part of the therapist, high levels of support, and high levels of empathy and unconditional positive regard.

Table 1 offers an overview of studies that investigated the relationship between interpersonal therapist behaviour and treatment outcome in behaviour therapy for the Rogerian therapist conditions empathy, warmth, positive regard, and genuineness, for support, for expertness, directiveness, explanations, and advice, for interpretations and confrontations, and for self-disclosure. The Rogerian therapist conditions that have been the most studied, as indeed they have been in psychotherapy research in general.

Several behavioural treatment analogous experiments have been conducted that investigated the impact of the Rogerian therapist variables on subjects' performance during conditioning and deconditioning tasks. Mickelson and Stevic (1971), Morris and Suckerman (1974a), Morris and Suckerman (1974b), and Vitalo (1970) demonstrated that facilitative therapist behaviour do influence the achievements of subjects on learning tasks and systematic desensitization procedures. It is important to bear in mind, however, that the subjects in these experiments were, for the most part, not real patients and that the number of contacts with the experimenters was restricted.

Eighteen studies on the relationship between the Rogerian therapist conditions and treatment outcome in behaviour therapy have been published. In some of these, however, the therapists' or patients' evaluations of their relationship were obtained at the end of treatment, thus not permitting any clear conclusions to be drawn about the causal relationship between both variables.

Reference	Type	N	Moment	Finding
Empathy, Warmth, Positive Regard, and Genuineness				
Alexander et al. (1976)	obsv	21	pre	+
Arts et al. (1994)	srq (p, t)	30	2, 10	0(p), +(t)
Bennun et al. (1986)	srq (p)	115	end	+
Bennun et al. (1986)	srq (p)	49	end	+
Bennun & Schindler (1988)	srq (p)	35	2	+
Blaauw & Emmelkamp (1991)	srq (p)	28	1-10	0
Chiappone et al. (1981)	srq (p, t)	45	5	+
Emmelkamp & van der Hout (1983)	srq (p, t)	13	end	+
Ford (1978)	srq (p)	39	3, 6, 8	+
Gustavson et al. (1985)	obsv	12	3, 7, 11	0
Hoogduin et al. (1989)	srq (p, t)	60	10	+(p), +(t)
Hoogduin et al. (1989)	srq (p, t)	25	2, 10	0(p), +(t)
Kaimer et al. (1989)	obsv	02	all	-
Keijsers et al. (1991b)	srq (p, t)	37	3, 10	+(p), 0(t)
Llewelyn & Hume (1979)	srq (p)	37	end	+
Mickelson & Stevic (1971)	expm	48	-	+
Morris & Suckerman (1974a)	expm	23	-	+
Morris & Suckerman (1974b)	expm	23	-	+
Murphy et al. (1984)	intv (p)	24	middle/end	+
Nelson & Borkovec (1989)	srq (p)	30	3, 12	+
Rabavilas et al. (1979)	srq (p)	36	end	+
Ryan & Gizynski (1971)	intv (p)	14	end	+
Schindler et al. (1983)	srq (p)	50	end	+
Sloane et al. (1975)	srq (p)	50	end	0
Sloane et al. (1977)	srq (p, t)	50	end	+
Vitalo (1970)	expm	16	pre	+
Williams & Chambless (1990)	srq (p)	33	4	+
Support				
Gustavson et al. (1985)	obsv	12	3, 7, 11	0
Greenwald et al. (1981)	obsv	20	4, 8	+
Kaimer et al. (1989)	obsv	02	all	+
Keijsers et al. (1991b)	srq (p)	37	3, 10	0
Llewelyn & Hume (1979)	srq (p)	37	end	+

Murphy et al. (1984)	intv (p)	24	middle/end	+
de Ruiter et al. (1989)	srq (p)	40	3	+
Ryan & Gizynski (1971)	intv (p)	14	end	+
Schindler (1988)	obsv	31	1-7	+
Sloane et al. (1977)	srq (p, t)	50	end	+
Expertise, Directives, and Advice				
Alexander et al. (1976)	obsv	21	pre	0
Bennun et al. (1986)	srq (p)	115	end	+
Bennun et al. (1986)	srq (p)	49	end	+
Bennun & Schindler (1988)	srq (p)	35	2	+
Blaauw & Emmelkamp (1991)	srq (p)	28	1-10	0
Emmelkamp & van der Hout (1983)	srq (p)	13	end	-
Elliott et al. (1982)	obsv	16	randomly	+
Greenwald et al. (1981)	obsv	20	4, 8	+
Hill et al. (1988)	obsv	08	all	0
Keijsers et al. (1991b)	srq (p)	37	3, 10	0
LaCrosse (1980)	srq (p)	36	pre	+
Murphy, et al. (1984)	intv (p)	24	middle/end	+
Sloane et al. (1977)	srq (p, t)	50	end	+
Williams & Chambless (1990)	srq (p)	33	4	+
Interpretations, and Confrontations				
Elliott et al. (1982)	obsv	16	randomly	+
Hill et al. (1988)	obsv	08	all	+(p),+(t)
Kaimer et al. (1989)	obsv	02	all	0
Self-Disclosure				
Alexander et al. (1976)	obsv	21	pre	0
Elliott et al. (1982)	obsv	16	randomly	0
Hill et al. (1988)	obsv	08	all	+(p), 0(t)
Llewelyn & Hume (1979)	srq (p)	37	end	-

Table 1 Therapist verbal behaviour in relation to treatment outcome: Overview of empirical findings. Notes: (t) = therapists' perspective; (p) = patients' perspective; srq = self-report questionnaire/rating scale; intv = unstructured, semi-structured, or structured interview; obsv = observation (response mode) system; + = significant positive finding; 0 = nonsignificant finding; - = significant negative finding.

Alexander, Barton, Schiavo, and Parsons (1976) studied therapist interpersonal skills in the context of a systems-behavioural family therapy. Prior to the start of treatment, the relationship skills of the participating therapists were rated. It was found the therapist relationship skills contributed highly to the treatment outcome variance. An overall rating of therapist structuring abilities (directiveness and self-

confidence), on the other hand, correlated only moderately with treatment outcome. In a study carried out by Rabavilas, Boulougouris, and Persissaki (1979), 36 patients diagnosed with phobic and obsessive-compulsive disorder received behavioural treatment, at the end of which they provided retrospective evaluations of their therapists. Respect, understanding and interest were found to correlate significantly with treatment outcome.

Chiappone, McCarrey, Piccinin, and Schmidtgoessling (1981) compared assertiveness training combined with Rogerian facilitative treatment conditions and assertiveness training alone. Forty-five participants completed the Relationship Inventory (RI; Barrett-Lennard, 1962) after the fifth session. Although Chiappone et al. were unable to demonstrate that the participants that received assertiveness training plus the facilitative treatment conditions achieved significantly higher treatment results, they found that the RI correlated significantly with six of the seven treatment outcome measures. In an earlier experiment, Ford (1978) had also recruited participants for an assertiveness training. Thirty-nine participants received individual assertiveness training. After the third, sixth and final treatment sessions, the participants completed the RI, evaluating their therapists' empathy, warmth, and genuineness. A variety of verbal therapists' behaviour were also coded using audio-recorded session samples. The results demonstrated that the RI administered after the third and last sessions correlated significantly with a small number of outcome measures. The RI administered after the sixth session, however, correlated significantly with more than half of the outcome measures, but again failed to correlate significantly with follow-up data. In addition, the third assessment RI ratings of patients that completed the treatment programme were significantly higher than those of treatment dropouts. The observed therapist behaviour only accounted for 15% to 30% of the RI ratings, indicating that the patients' perception of the therapeutic relationship was only partly based on the actual therapist behaviour.

In a study by Emmelkamp and van der Hout (1983), 13 patients diagnosed with panic disorder with agoraphobia received group exposure in vivo. The patients completed the RI adapted by Lietaer (1976) for the Dutch language area. Five subscales of this instrument were used, i.e., (1) empathy, (2) positive regard, (3), incongruence, (4) negative regard, and (5) directivety. Lietaer (1976) suggested combining the subscales 1, 2, 3, and 4 into one RI composite score, forming a global measure of the quality of the therapeutic relationship. The RI was completed at the end of treatment and the therapist and patient scores were added. The quality of the therapeutic relationship correlated significantly and positively with treatment outcome.

Several other studies have been conducted using the four subscale version of the RI. Hoogduin et al. (1989) treated 60 patients suffering from obsessive-compulsive disorder (OCD) with exposure in vivo and response prevention. The therapists and

patients completed the RI at the end of Session 10. Both the therapists' perception of the quality of the therapeutic relationship (RI-therapist) and the patients' perception of the quality of the therapeutic relationship (RI-patient) correlated moderately positively but significantly with the reduction of complaints at the end of the treatment. Because the RI was completed relatively late in treatment, Hoogduin et al. conducted a second study with 25 OCD patients. Both RI forms were completed at the end of Sessions 2 and 10. The moderate but significant correlations between reduction of complaints and both RI forms at the end of Session 10 were replicated. At the end of Session 2, only the RI-therapist correlated significantly with treatment outcome. The above findings were again replicated in a third study conducted by Arts et al. (1994) involving 30 OCD patients. In addition, these patients forming an experimental group, were compared to a control group of 25 OCD patients that had received similar treatment and similar assessments. Following Session 2, the therapists in the experimental group were instructed to use specific relationship enhancement techniques. These techniques were selected from a large number of motivating strategies collected from the literature (Keijsers & Kuijpers, 1988; Schaap & Hoogduin, 1988) on the basis of RI-patient ratings at Session 2. The enhanced quality of the therapeutic relationship did not result in significantly higher treatment outcome, though the difference in improvement between the experimental group (36%) and the control group (27%) were substantial. In a final study involving 37 anxiety disorder patients, the RI was completed at the end of Sessions 3 and 10. The patients' evaluations of the therapeutic relationship after Sessions 3 and 10 correlated moderately but significantly positive with outcome; the therapists' evaluation of the therapeutic relationship did not correlate significantly with outcome (Keijsers et al., 1991b).

It appears, therefore, that the patients' and therapists' satisfaction with the therapeutic relationship assessed with the RI early in behavioural treatment, is of some importance for outcome, though the empirical evidence as yet available is still far from conclusive.

Schindler, Revenstorf, Hahlweg, and Brengelmann (1983) studied the impact of perceived therapist characteristics in two behaviour marital therapy programmes. A 27-items bipolar adjective list was designed to assess the spouses' perceptions of the therapist. This rating scale was completed by the spouses at the end of their treatment. Factor analysis yielded three factors; empathy, directiveness, and therapists' activity. It was found that all factors correlated modestly but significantly with treatment outcome postmeasures. At six-months' follow-up, only empathy correlated significantly with treatment outcome. The rating scale used by Schindler et al. (1983) was further adapted by Bennun, Hahlweg, Schindler, and Langlotz in 1986. In addition to the therapist behaviour, a patient behaviour scale, to be completed by the therapist, was added. Both scales contained 29 bipolar adjective pairs. In this form

the instrument is referred to as the Therapist Client Rating Scale (TCRS). In three studies, the subscale 'positive regard', as rated by the patients, was positively correlated with behavioural treatment outcome. However, in two of these studies, the TCRS was completed at the end of the last treatment session, thus permitting no clear conclusions to be drawn about the causal relationship between the perceived relationship variables and treatment outcome. In the third study involving 35 phobic patients, the patients and therapists completed the TCRS at the beginning of the second session. High positive correlations were found between "positive regard" and treatment outcome (Bennun & Schindler, 1988). In two recent studies, the TCRS again was completed in an early treatment phase. In the first study, 28 OCD patients were treated using in vivo exposure (Blaauw & Emmelkamp, 1991). In the second study, 37 patients with anxiety disorders were treated using behaviour therapy (Keijsers et al., 1991b). Neither one of these two studies replicated the findings of Bennun and Schindler.

In 1990, Williams and Chambless carried out a study in which 33 patients suffering from panic disorder with agoraphobia were given ten sessions of exposure in vivo. After the fourth session, the patients completed a rating scale consisting of six dimensions; (1) caring/involved (consisting of eight factors that show high intercorrelations and high internal consistency), (2) self-confidence, (3) unconditionally accepting, (4) challenging, (5) explicitness, and (6) willing to be known. The authors found that the patients that rated their therapists higher on the caring/involved dimension improved more. This correlation was rather moderate, however, and the probability levels were obtained by means of one-tailed tests. "Unconditional acceptance" was not found to correlate with symptom reduction in this study.

Lastly, several studies have been carried out that provide data on the actual verbal therapist behaviour in relation to behavioural treatment outcome. Gustavson et al. (1985), treated 12 agoraphobic patients with in vivo exposure. Samples of audiotape recordings of the first, middle, and last stages of treatment were selected and two independent observers rated the frequency of fifteen verbal therapist behaviour modes. The number of empathic remarks by the therapists correlated nonsignificantly with treatment outcome. In another study, Kaimer, Reinecker, and Schindler (1989; discussed in greater detail below) compared the therapist and patient behaviour in a successful and an unsuccessful case of cognitive behaviour treatment for depression. They found that, in the first and last phases of treatment, the therapist used more empathic statements in the failure case than in the successful case.

Many of the above studies are somehow impaired by methodological problems. Evaluations of the therapeutic relationship were obtained in retrospect, questionnaires were used with a factorial structure that was not tested, the samples sizes were small,

to name but a few. Nevertheless, two preliminary conclusions can be drawn. The first is that behaviour therapists establish a relationship with their patients that is characterized by an active, directive stance and high levels of empathy, unconditional positive regard, and support. There is no empirical evidence to suggest that behaviour therapists are more superficial, colder or more mechanical in their contact with their patients than therapists from other psychotherapeutic orientations.

Secondly, there is sufficient empirical evidence to suggest that the Rogerian therapist variables, empathy, nonpossessive warmth, positive regard, and genuineness, have a consistent, though moderate, impact on treatment results in behaviour therapy. It appears doubtful, however, that the patient and therapist evaluations of Rogerian therapist variables are directly reflective of the actual therapist behaviour during the treatment. Self-report ratings and codings of observed Rogerian therapist variables tend to be not highly correlated. We will return to this issue later.

Support

Behavioural treatment is normally goal-directed. Together with the patient the therapist examines the patient's present, dissatisfying situation in terms of maladaptive behaviour, feelings and thoughts. One or more of these types of behaviour are selected for behavioural change. The therapist carefully guides the patient through the execution of behavioural techniques towards the achievement of these behavioural changes. The patient is encouraged, coached, given feedback, reassurance, and praise. The questions under scrutiny here are whether behaviour therapists are more supportive than therapists from other psychotherapeutic orientations, and whether the amount of support enhances behavioural treatment outcome.

Brunink and Schroeder (1979) compared the therapist verbal behaviour of gestalt therapists, psychoanalytically oriented therapists, and behaviour therapists and found that behaviour therapists provided significantly more supportive communications than either the psychoanalysts or the gestalt therapists. They used more statements of reassurance, praise and sympathy. Behaviour therapists also used more directive statements than psychoanalytic therapists, but in many other aspects their communication style was surprisingly similar.

In a carefully conducted study by Hardy and Shapiro (1985), 27 patients received two types of treatment one after the other, person-oriented (exploratory) therapy and cognitive-behavioural (prescriptive) therapy. All sessions were recorded on tape and coded, using a somewhat extended version of Elliott's Response Mode System (Elliott, Barker, Caskey, & Pistrang, 1982). They found that "reassurance" was the most frequently encountered therapist response mode in both types of treatment. A somewhat higher use was made of reassurance in prescriptive therapy (47.85%) than in exploratory therapy (43.8%), but these differences were nonsignificant. Hill, Carter, and O'Farrell (1983) found that statements of approval-

reassurance together with "minimal encouragement" such as "humming", made up 44% of all therapist behaviour in short-term, insight-oriented psychotherapy. Lastly, Gustavson et al. (1985) found that praise, empathy, feedback, and encouragement belonged to those verbal therapist behaviour modes occurring most frequently in the behavioural treatment of agoraphobia.

It seems that supportive statements are fairly common in psychotherapy, their frequency being somewhat higher in behavioural treatment than in other forms of psychotherapy. The question is whether the amount of support can actually be connected with behavioural treatment outcome. In two retrospective studies involving behaviour therapy patients, it was found that therapist support was considered by the patients to be very helpful. The patients who felt that their therapists had elicited positive expectations in regard to the success of their treatment reported they had improved more (Ryan & Gizynski, 1971). "Getting reassurance and encouragement" was rated as the most helpful item by behaviour therapy and psychotherapy patients in the study by Llewelyn and Hume (1979).

In the study by Keijsers et al. (1991b) patient-therapist pairs completed the TCRS at the end of the third and tenth sessions. The factor "support" correlated nonsignificantly with treatment outcome. In a study carried out by de Ruiter, Garssen, Rijken, and Kraaimaat (1989), 40 patients suffering from panic disorder with agoraphobia received eight sessions of behavioural treatment. At the end of Session 3, the patients and the therapists completed the Dutch adaptation of Lubors-ky's Helping Relationship Questionnaire (HRQ). This instrument was designed to assess therapists' and patients' evaluation of the "therapists' understanding", "the therapists' support" and of "their mutual cooperation in dealing with the patients' problems". Moderate, but significantly positive correlations were found between the patient form of the HRQ and treatment outcome. One criticism of the conclusions of this study can be raised, however. Five of the eleven items of the HRQ, appear to reflect the patients' experience of benefiting from their treatment, rather then their perception of the therapeutic relationship. In the study of Gustavson et al. (1985), the occurrence of encouraging remarks, assurance, feedback and praise of the therapist was rated by independent observers. No significant correlations with outcome were found though this may be caused by a lack of sufficient statistical power.

Although when behaviour therapy patients are asked to evaluate their treatment in retrospect they report that they felt a supportive stance on the part of the therapist to be of considerable help, it appears that support assessed during treatment does not have a consistent impact on treatment outcome. This would be in line with the findings from psychotherapy process research in general. Orlinsky and Howard (1986) reviewed 25 findings on the impact of support on treatment outcome. They found that more than three-quarters of the findings showed a zero association and concluded that support "does not have much consistent impact" (p. 326).

Two studies that employed sequential analyses to investigate the therapeutic interaction, however, shed a different light on the importance of supportive statements in behaviour therapy. Schindler (1988) reported on a study involving 31 patients suffering from chronic insomnia. The patients received a standardized behavioural treatment programme of 14 sessions. Analyzing the audio-recordings of the first seven sessions, Schindler found that the nonimproved patients presented significantly fewer self-disclosures, change reports, and cooperative statements following supportive statements by the therapist, than did the patients that were treated successfully. Also, the therapists of the nonimproved patients used significantly fewer supportive statements in response to patients' self-disclosure, change reports, or cooperative statements. Similar findings were reported by Kaimer et al. (1989) conducting a study involving two depressed patients. They found that the successfully treated patient showed significantly more cooperative behaviour following supportive statements by the therapists than would be expected on pure probability calculation, whereas the patient that failed to improve, did not.

Supportive statements by the therapist, encompassing minimal encouragement, positive feedback, positive labelling, praise and recognition, appear to be important in promoting a variety of desirable verbal patient behaviour. Schaap et al. (1993) argue that therapist support does not simply equal social reinforcement, but increases the patients' expectancy in terms of self-efficiency and reduces the sense of demoralization frequently encountered in patients.

Expertness, directiveness, information, and advice

As might be expected, a number of significant research findings indicate that compared to therapists from other psychotherapeutic orientations, behaviour therapists in general talk more (Sloane et al., 1975; Stiles et al., 1988), ask more questions (Hardy & Shapiro, 1985; Stiles et al., 1988), are more directive (Brunink & Schroeder, 1979; Greenwald et al., 1981; Sloane et al., 1975; Wogan & Norcross, 1985), offer more structure (Greenwald et al., 1981; Raue et al., 1992; Sloane et al., 1975; Wogan & Norcross, 1985) and more frequently provide information and advice (Hardy & Shapiro, 1985; Sloane et al., 1975; Stiles et al. 1988). Of all verbal utterances during cognitive-behavioural treatment, 12.4% (Hardy & Shapiro, 1985) and 7% (Stiles et al., 1988) were "general advisement", 11.3% (Hardy & Shapiro, 1985) and 10.1% (Stiles et al., 1988) were (open and closed) questions, and 7.6% (Hardy & Shapiro, 1985) were information responses. Kaimer et al. (1989) reported relative frequencies of 8% and 9% for the therapist's directive behaviour. Again the question arises as to whether an active, directive stance on the part of the therapist promotes a favourable behavioural treatment outcome.

Within the psychotherapy process literature in general there are few studies on the impact of therapists' use of directive interventions on treatment outcome.

Orlinsky and Howard (1986) concluded that the few research studies that have been conducted on therapists' directivety and treatment outcome do not permit any clear conclusions to be drawn. One could not expect it to be otherwise, given the fact that the empirical research on therapeutic relationship variables originated from a client-centered-therapy tradition. However, over the past twelve years several studies have been carried out within a behavioural framework that encompassed these variables. These will be discussed below. In another area of research the communication of expertness cues and their impact on treatment outcome, mediated by the patients' perceptions, has been studied, namely in applied social-psychology. Although the usual research paradigm tends to be laboratory, therapy-analogue in nature, both on a theoretical as well as on an empirical level researchers in the field of social-psychology focussed on important issues concerning the social influence process in psychotherapy and counselling. This extensive body of literature has been reviewed in several excellent publications (Corrigan, Dell, Lewis, & Schmidt, 1980; Heppner & Claiborn, 1989; Heppner & Dixon, 1981). Several field studies stemming from this area of research are discussed below.

LaCrosse (1980) studied the effects on counselling treatment outcome of the patient-perceived therapist characteristics: expertness, attractiveness, and trustworthiness. Thirty-six patients presented with drug-abuse related problems, were seen by counsellors for an average number of 11 sessions. Expertness, attractiveness, and trustworthiness were assessed using the Counselor Rating Form (CRF), an instrument containing 36 bipolar adjective scales and quite similar to the TCRS. The CRF was completed by the patients immediately after the intake session. Expertness, attractiveness, and trustworthiness were all significantly correlated with treatment outcome. Regression-analysis, however, revealed that expertness was the single, most powerful predictor of treatment outcome, accounting for 35.2% of the outcome variance. This finding accords with conclusions from the literature surveys of Corrigan et al. (1980) and Heppner and Dixon (1981) who conclude that expertness is the most consistently potential patient-perceived therapist characteristic. In two subsequent studies, however, it was found that patients' ratings of the expertness of the therapist were unaffected by the actual experience level of the counsellor or by the patients' prior expectations of their counsellor (Heppner & Heesacker, 1982; Heppner & Heesacker, 1983).

In several studies that compared the retrospective evaluations of improved and nonimproved behaviour therapy patients, it was found that the improved patients perceived their therapists as more confident and persuasive (Ryan & Gizynski, 1971), more competent and experienced (Bennun et al., 1986), and more directive, and active (Bennun et al., 1986; Schindler et al., 1983). The improved patients considered the practical advice of the therapist as very helpful (Sloane et al., 1977). Emmelkamp and van der Hout (1983) on the other hand, found a significant negative correlation

between the perceived directivety of the therapist and the treatment outcome of 13 agoraphobic patients that were treated using group exposure in vivo.

In several studies the perceived therapist characteristics were assessed early in treatment. In the Bennun and Schindler (1988) study, already outlined above, the therapist factors 'competency/experience' and 'activity/guidance', rated by the patients with the TCRS, strongly correlated with outcome. Somewhat questionable in the study, though, are the high intercorrelations between these two factors and the high correlations with the third therapist factor, 'positive regard/interest'. Furthermore, Blaauw and Emmelkamp (1991) and Keijsers et al. (1991b), using the Dutch adaptation of the TCRS, failed to replicate these.

Williams and Chambless (1990) used a six-dimension rating scale to assess the patients' evaluations of the therapist after the fourth session. In addition to the dimension caring/involved, already discussed above, the authors found that patients that perceived their therapist as being more self-confident, showed greater improvement on a behavioural avoidance test.

The research findings thus far are rather inconsistent. It is, nevertheless, possible to draw several preliminary conclusions. Firstly, compared to person-oriented psychotherapy and psychodynamic treatment, behaviour therapists do take a more active stance in treatment. They provide more directive guidance, more advice, more information, more structure, and talk more during the sessions. Compared to other therapist response modes, such as emphatic statements and acknowledgements, however, the directive statements and advice of the behaviour therapist constitute a rather small proportion (approximately 10%) of the therapists' verbal behaviour.

Secondly, with regard to treatment outcome, the patients' perception of the therapist as being self-confident, skillful, and active appears to be of some importance for treatment outcome. It remains unclear, however, how the patients' evaluations of the therapists' expertness are formed. It has been suggested that in many patients the perception of their therapist as being skillful arises from their decision to seek professional help for problems they can no longer solve by themselves (Corrigan et al., 1980; Frank, 1974; Strong & Matross, 1973).

Thirdly, empirical data regarding the actual provision of directives, advice, and information by the therapists is scarce. Alexander et al. (1976) reported that, whereas an overall rating of therapist relationship skills prior to treatment contributed strongly to the treatment outcome variance of systems-behavioural family therapy, an overall rating of therapist structuring abilities (directiveness and self-confidence) did so only moderately. In a carefully conducted study involving patients that were treated by means of eclectic and psychodynamic therapy, Elliott et al. (1982) found that interpretations and advice were considered by the patients and therapists to be the most helpful therapist modes during the replay of the videotaped recording,

immediately after the treatment session. Using a similar research design, Hill et al. (1988) found low patient helpfulness ratings and moderately high therapist helpfulness ratings for therapists' direct guidance.

Their is no clear empirical support for the notion that therapists' directives, advice, and information are important for behavioural treatment outcome. Nevertheless, behavioural techniques have to be introduced, suggested, prescribed, and advised on. Maybe therefore the issue should be dealt with differently. Maybe the question is not whether therapists' directives and advice enhance patients' achievement of behavioural changes, but under which circumstances the directives and advice are accepted and complied with by the patients.

Interpretations and confrontations

Interpretations are explanatory statements made by the therapist in order to make the meaning of an action or experience clear to the patient. The therapists draw inferences that are not directly expressed by the patient. Confrontations are statements not only intended to foster insight, but also to offer the patient a meaningful experience. The therapists make direct observations about the patients or draw attention to discrepancies in the patients' verbal messages or between verbal and nonverbal communication. Neither of these techniques is particularly endorsed by behaviour therapists.

Brunink and Schroeder (1979) found that expert gestalt therapists, psychoanalytically oriented therapists and behaviour therapists provided interpretations equally as often. Hardy and Shapiro (1985) and Stiles et al. (1988), on the other hand, found that in cognitive-behavioural (prescriptive) treatment therapists provided significantly fewer interpretations than in person-oriented (exploratory) treatment. Hardy and Shapiro (1985) reported a percentage of 5.9%, and Stiles et al. (1988) 14.3% for the occurrence of interpretations in prescriptive treatment. Hill et al. (1983) carried out a detailed case study of a patient receiving short term psychotherapy. They found that the therapist's interpretations increased from 10% in the first sessions to the 17% in the last sessions. It seems, therefore, that interpretations are employed regularly in psychotherapy and are indeed used by behaviour therapists as well. In addition, the frequency of interpretations appears to increase during the course of treatment. But can they be considered helpful?

Elliott et al. (1982) found that interpretations were considered to be one of the most helpful therapist modes during the replay of the videotaped recording immediately after the treatment session. Hill et al. (1988) also found that interpretations were evaluated as quite helpful by both the therapists and the patients. According to Schaap et al. (1993), however, although therapists' interpretations can precede new insights, understanding, and self-disclosure, they can also give rise to short responses, resistance, and rejection on the part of the patient.

Orlinsky and Howard (1986) reviewed 22 studies on the importance of interpretations for psychotherapy outcome. Eleven studies showed that interpretations positively affected treatment outcome, eight studies showed no significant association, and three (two on borderline and psychotic patients) showed that interpretations were negatively associated with treatment outcome. Orlinsky and Howard concluded that interpretations do not appear to have a consistent, positive effect on treatment outcome. They assume that other important factors act to neutralize or potentiate their impact on treatment outcome.

The studies on confrontations are scarce. Kaimer et al. (1989) compared the therapist and patient verbal behaviour of a successfully treated depressed patient and a nonimproved depressed patient. The percentage of therapists' confrontations /interpretations with the improved and nonimproved patient, 3% and 1% respectively, did not differ significantly. Hill et al. (1983) reported that 5% of the therapists' verbal behaviour modes were confrontations. Confrontations were followed by new insights more often than would be expected by chance. In another study, Hill et al. (1988) found that confrontations attained moderate helpfulness ratings from the therapists, but were not considered helpful by the patients. Hill et al. argue that confrontations may arouse discomfort in the patients. They interrupt the patients' train of thought by presenting discrepancies or differing points of view. However, these disruptions may create the necessary foundation for change. Schaap et al. (1993) note that:

> "It is unclear whether confrontations and criticism refer to necessary and appropriate therapist behaviour or if they occurs out of a sense of helplessness and difficulty in case management." (p. 156)

Orlinsky and Howard (1986) reviewed seven studies on confrontations. All studies showed significant positive correlations between confrontations and treatment outcome. Orlinsky and Howard (1986) add that the therapeutic value of interpretations and confrontations cannot be established in general, but will largely depend on the content focus.

Therapist self-disclosure

Therapist self-disclosure is often regarded as an important facilitative therapeutic intervention. It may enhance patient involvement in the treatment process and subsequent patient self-disclosure. A host of therapy-analogue studies indeed lend support to this hypothesis (Beutler, Crago, & Arizmendi, 1986). Naturalistic studies, on the other hand, indicate that therapist self-disclosure is fairly uncommon in psychotherapy. The following percentages of therapist self-disclosing remarks have been reported: in person-oriented psychotherapy, 2.6% (Hardy & Shapiro, 1986), less

than 1% (Hill et al., 1983), 1% (Hill et al., 1988), 6.1% (Stiles et al., 1988), and in behaviour therapy, 1.6% (Hardy & Shapiro, 1986), and 5.0% (Stiles et al., 1988). Hardy and Shapiro (1986) and Stiles et al. (1988) found no significant differences between the frequencies of therapist self-disclosure during person-oriented therapy and cognitive-behavioural treatment. In the Wogan and Norcross study (1985) on the other hand, therapists from different orientations were asked to estimate how often they provided self-disclosing remarks in their current treatments. Wogan and Norcross found that behaviour therapists and psychodynamic therapists rated their use of self-disclosing remarks significantly lower than did the humanistic and eclectic therapists.

Several studies investigated the impact of therapist self-disclosure on treatment outcome. Alexander at al. (1976), treating 21 families with systems-behavioural family therapy, found no significant association between therapist self-disclosure and treatment outcome. Llewelyn and Hume (1979) studied the patients' retrospective evaluations of their treatment. They found that both behaviour therapy and psychotherapy patients did not find therapists' self-disclosure helpful. Hill et al. (1988) found that therapist self-disclosure was evaluated as being very helpful by the patients, but not by the therapists. Elliott et al. (1982) found that therapist self-disclosure was not considered helpful by the patients or the therapists during a video-replay immediately after the session. In their extensive literature review of psychotherapy process research Orlinsky and Howard (1986) conclude:

> "The net impression is that therapist self-disclosure may occasionally be helpful, but is generally not a powerful mode of therapeutic intervention" (p. 330)

In line with Orlinsky and Howard's conclusion, the scarce empirical data on therapist self-disclosure in behavioural treatment suggests that therapist self-disclosure is not of importance for treatment outcome and appear to occur rather infrequently during treatment.

Interpersonal Patient Behaviour

Viewed against the extensive research that has been carried out on interpersonal therapist behaviour, interpersonal patient behaviour appears rather neglected, and there is little consensus as to which aspects of this behaviour might be considered important for treatment outcome. Far too often the patients have been viewed as a mere responders, complying with the therapists' directives or disclosing themselves in response to the facilitative atmosphere created by the therapist. Orlinsky and Howard (1986) noted that the patient is also capable of creating an atmosphere of trust, openness and respect; the patient is also capable of genuineness, of directing the

treatment programme, or of addressing the therapeutic relationship. Another problem in connection with the interpersonal patient behaviour arises from the fact that there are differing views of treatment held by varying schools of psychotherapy. Certain interpersonal patient behaviour such as self-disclosure or insight might be considered as facilitative for treatment outcome in behaviour therapy, whereas in person-oriented psychotherapy they are considered to be the treatment results.

Only recently have behaviour therapists become interested in the interpersonal patient behaviour during treatment. Since behaviour therapists attribute behavioural change to the successful application of appropriate behavioural techniques, it is not surprising that they became particularly interested in patient's motivation, participation, and resistance behaviour (Jahn & Lichstein, 1980; Kanfer & Grimm, 1980; Keijsers, Schaap, & Hoogduin, 1990; Keijsers et al., 1991a; Miller, 1985; Nelson & Borkovec, 1989; Schindler, 1988).

Below, three topics will be discussed: patient (1) self-disclosure and problem description, (2) self-exploration, insight, and change reports, and (3) motivation, participation, and resistance. 1 and 3 refer to the patients' acceptance of their role in treatment, 2 refers to the patients' therapeutic achievements during the treatment. Again, empirical studies are reviewed that focus on the contribution of interpersonal patient behaviour to behavioural treatment outcome. Studies that presented empirical data on their relationship with treatment outcome in behaviour therapy are summarized in table 2.

Reference	Type	N	Moment	Finding
Self-Disclosure, and Problem Descriptions				
Bennun et al. (1986)	srq (t)	115	end	+
Bennun et al. (1986)	srq (t)	49	end	+
Bennun & Schindler (1988)	srq (t)	35	2	+
Blaauw & Emmelkamp (1991)	srq (t)	28	1-10	0
Kaimer et al. (1989)	obsv	02	all	+
Keijsers et al. (1991b)	srq (t)	37	3, 10	0
Llewelyn & Hume (1979)	srq (p)	37	end	+
Schindler (1988)	obsv	31	1-7	+
Self-Exploration, Insight, and Change Reports				
Kaimer et al. (1989)	obsv	02	all	+
Schindler (1988)	obsv	31	1-7	+

Participation, Motivation, and Resistant Behaviour				
Bennun et al. (1986)	srq (t)	115	end	+
Bennun et al. (1986)	srq (t)	49	end	+
Bennun & Schindler (1988)	srq (t)	35	2	+
de Beurs (1993)	srq (t)	48	1	0
Blaauw & Emmelkamp (1991)	srq (t)	28	1-10	0
van Bohemen (1987)	obsv	12	first, last	+
Chamberlain et al. (1984)	obsv	27	first,middle,last	-
Hoogduin & Duivenvoorden (1988)	srq (t)	60	intake	0
Kaimer et al. (1989)	obsv	02	all	+
Keijsers et al. (1991a)	srq (p)	53	intake	+
Keijsers et al. (1991b)	srq (t)	37	3, 10	0
Mathews et al. (1974)	srq (t)	36	pre	0
Mathews et al. (1976)	srq (t)	36	pre	0
Mawson et al. (1982)	obsv	40	-	+/0
Nelson & Borkovec (1989)	obsv (p)	30	all	0
Schindler (1988)	obsv	31	1-7	+

Table 2 Patient verbal behaviour in relation to treatment outcome: Overview of empirical findings. Notes: (t) = therapists' perspective; (p) = patients' perspective; srq = self-report questionnaire/rating scale; intv = unstructured, semi-structured, or structured interview; obsv = observation (response mode) system; + = significant positive finding; 0 = nonsignificant finding; - = significant negative finding.

Patient self-disclosure and problem description

Several studies offer data on the frequency of patient self-disclosure and problem descriptions. Hill et al. (1983) presented a detailed case description of a woman who received twelve sessions of insight-oriented psychotherapy. Their study demonstrated a gradual decline in problem description over the course of treatment. Of the verbal patient behaviour modes, 54% were problem descriptions and 25% were short answers. Schindler, Hohenberger-Sieber, and Hahlweg (1989) studied the intake sessions of 64 patients suffering from chronic insomnia. Of the verbal patient behaviour modes, 44% were problem descriptions, 28% were short answers, and 13% were self-disclosing remarks. Self-disclosure in this study was defined as addressing one's emotions. Stiles and Sultan (1979) analyzed ten session transcriptions from therapists of different schools using a observation instrument. Irrespective of the psychotherapeutic orientation of the therapists, 75% of the patients' verbal activity were descriptions of feelings and problems. Stiles et al. (1988) found a percentage of 36.6% patient self-disclosure and 34.3% offering factual information during cognitive behavioural (prescriptive) treatment. Together, self-disclosing statements, offering factual information, and acknowledgements of the therapists' communications made up approximately 85% the verbal patient behaviour in prescriptive as well as in exploratory treatment. Stiles et al. assume that the differences between verbal patient

behaviour in prescriptive and exploratory treatment are largely due to the more marked differences in verbal therapist behaviour both treatments. The patients themselves appear to use a rather uniform pattern of communication across the different types of psychotherapeutic treatment.

Overall, it seems that self-disclosure and problem descriptions make up approximately three quarters of all patient verbal behaviour in psychotherapy as well as in behaviour therapy, though the frequency of problem descriptions may decrease during the course of treatment. It is questionable whether the distinction between self-disclosure and problem description, made in most of the psychotherapy response mode systems, is conceptually sound. Most patients will bring up problems of a highly personal and intimate nature, problems they feel afraid or ashamed of. The degree of self-relatedness and emotional content, on the other hand, will largely be reflective of differing communication styles associated with sex and socio-cultural background (Garfield, 1986; Pope, 1979).

Reviewing the literature on patients' retrospective evaluation of their treatment, Orlinsky and Howard (1986) conclude that many patients considered talking about their problems to be very helpful (also found by Llewelyn & Hume, 1979). The authors suggest, however, that it should not be the amount of time the patients talk about their problems that is considered important, but rather the way in which the patients view and discuss their problems with their therapists.

Several studies addressed the relationship of patient self-disclosure and problem descriptions with behavioural treatment outcome. Most of them have already been outlined above. Of the three studies that used the TCRS to investigate the perceived therapists' and patients' characteristics early in treatment, only one reported significant correlations between the patient-factor "self-disclosure" and treatment outcome (Bennun & Schindler, 1988). Blaauw and Emmelkamp (1991), and Keijsers et al. (1991) using the Dutch adaptation of the TCRS, did not find significant correlations.

Schindler (1988) found that both the conditional probability of therapists' supportive statements, immediately followed by patients self-disclosing remarks (i.e., addressing one's feelings), and patients' self-disclosing remarks, immediately followed by therapists' supportive statements was significantly higher in patients who had been successfully treated for chronic insomnia than in patients who had not.

Kaimer et al. (1989) compared therapist and patient behaviour in an successful and an unsuccessful case of cognitive behaviour treatment. The improved patient used significantly more problem descriptions and significantly fewer short answers during treatment than the nonimproved patient. The self-disclosure frequency of both patients, 14% and 13% respectively, did not differ significantly, however. In line with the above findings of Kaimer et al., Verhulst and van de Vijver (1990) demonstrated that the therapist mode most likely to elicit patients' resistance in behaviour therapy

and psychodynamic therapy is information-seeking behaviour, such as questioning the patients about the nature and origin of their problems. Intuitively it makes sense that patients who do not feel like talking much about their problems restrict themselves to short answers, or, alternatively, that therapists tend to use more closed questions when the patients dawdle over the open ones. Furthermore, Elliott et al. (1982) and Hill et al. (1988) found that closed questions were rated as being the least helpful of all therapist verbal behaviour. Orlinsky and Howard (1986) introduced the dimension of patients' openness versus defensiveness during psychotherapeutic treatment. Fourteen out of 16 findings, reviewed by them on this topic, showed a positive association between patients' openness and treatment outcome. It appears, therefore, that the patients' readiness to discuss their problems during treatment has an important bearing on therapeutic outcome.

In conclusion, although talking about their feelings and problems is considered important by many patients who received psychotherapeutic treatment, there is insufficient prospective data relating to behaviour therapy to support this hypothesis. It may be, though, that the patients' readiness to discuss their problems openly, a variable not yet empirically studied in behaviour therapy, is also of some importance for behavioural treatment outcome.

Self-exploration, insight, and change reports

Self-exploration and insight have been regarded as key elements in client-centered and psychoanalytic theory of psychotherapy. Orlinsky and Howard (1986) however, found nonsignificant correlations with treatment outcome in 26 out of 36 studies that investigated the issue.

In behaviour therapy, self-exploration and insight are not regarded as the major catalysts for bringing about change. To learn to understand one's problems, though, seems important for many behaviour therapy patients. 88% of the 25 behaviour therapy patients in the Sloane et al. (1977) study who evaluated their treatment in retrospect, rated the item "the therapist's helping me to understand my problems" as very important. Only 8% considered the item unimportant. Of course it can be argued that information about one's diagnosis cannot be compared to the exploration of inner conflicts.

Change reports are statements made by the patients, during treatment, about attempted and/or accomplished behavioural changes. Kaimer et al. (1989) comparing the verbal therapist and patient behaviour of two depressed patients treated by means of behaviour therapy, found that the successfully treated patient made significantly more change reports (9%) during treatment than the patient who failed to improve (6%). Schindler (1988) found that both the conditional probability of therapists' supportive statements, immediately followed by patients' change reports, and

patients' change reports, immediately followed by therapists' supportive statements was significantly higher in patients who were successfully treated for chronic insomnia, than those who were not. Schindler concluded that therapists' supportive statements may foster patients' awareness of changes that are taking place and encourage them to press ahead.

In conclusion, the importance of self-exploration and insight for psychotherapy outcome remains controversial. No data is available on behaviour therapy outcome specifically. Patients' statements about attempted or achieved behavioural changes during treatment may be associated with final behavioural treatment results.

Motivation, participation, and resistance

Patient's active participation, motivation for treatment, and resistant behaviour together form our final cluster of interpersonal patient behaviour that has been regarded as important in most forms of psychotherapy. The three concepts are, however, ill-defined and little understood.

Patient's participation refers to the patients' acceptance of their role in the psychotherapeutic process and their subsequent behaviour. As such, the concept is sufficiently broad to encompass almost all patient interactional behaviour that are considered to be important by the therapist. Researchers for the most part, defined the concept by selecting a number of patient behaviour modes that were considered as indicative of the patients' willingness to participate. For example, the category "cooperation" in the Coding system for Interaction in Psychotherapy (CIP; Schindler et al., 1989) contains patients' statements about treatment plans, treatment goals they would like to achieve, and statements that express their trust in their treatment.

Motivation for treatment is an even more complex concept than patient's participation. The concept refers to patients' disposition to participate. From the clinical literature Rosenbaum and Horowitz (1983) collected 92 different demographic, psychological, and social-psychological variables that have been considered indicative of the patient's motivation for psychotherapy. From the same source Kersten, Hoogduin, and Schaap (1988) gathered 22 different indices that were thought to constitute patient's motivation for treatment. Though frequently considered a "conditio sine qua non" for successful treatment, patient's motivation still remains a multifaceted and little understood concept. Orlinsky and Howard (1986) reviewed 18 findings on patient "role-engagement" and psychotherapy outcome. Of these, 13 were significant, indicating that patient "role-engagement" is an important factor in therapy outcome.

Several studies investigated the importance for behavioural treatment outcome of patient's participation and motivation. Of the three studies that completed the TCRS early in treatment, only Bennun and Schindler (1988) found a significant correlation between the patient factor "cooperation/goal orientation" (e.g., consistent, careful,

decisive) and treatment outcome. Blaauw and Emmelkamp (1991), and Keijsers et al. (1991b) using the Dutch adaptation of the TCRS, failed to replicate this finding. Schindler (1988) found that patients' cooperative statements followed or preceded by therapists' supportive statements occurred significantly more often in successfully treated patients than in patients that failed to improve. Kaimer et al. (1989), using the same response mode system that was used by Schindler, failed to replicate this finding.

In three studies involving agoraphobic patients (de Beurs, 1993; Mathews et al., 1974; Mathews et al., 1976) and one study involving OCD patients (Mawson et al., 1982) nonsignificant relationships between patient's motivation and treatment outcome were reported. Only in de study by de Beurs, however, a questionnaire was used to assess patient's motivation. In the other three studies the therapists or independent assessors were asked to estimate the patient's motivation. The 7-item motivation questionnaire used in de Beurs' study was also used in a previous study carried out by Hoogduin and Duivenvoorden (1988), 60 OCD patients were treated by means of exposure and response prevention. The motivation questionnaire was completed at the start of treatment. Patient's motivation was the only psychological patient variable that differentiated significantly between the patients that had improved and those that had not improved at the end of treatment.

Keijsers et al. (1991a) converted the 7-item motivation questionnaire into a self-report questionnaire to be completed by the patients, and added five new items. Fifty-three patients, suffering from anxiety disorders, completed the instrument prior to the start of behavioural treatment. Although the underlying factors, Willingness to Participate, Level of Distress, and Pressure from Relevant Others correlated nonsignificantly with treatment outcome in their study, the authors found that half of the items, taken conjointly, did.

Resistance has been addressed theoretically for many decades. Various theoretical models have been proposed to explain the resistance phenomenon and a number different concepts such as "reactance", "noncompliance", and "opposition" have been proposed. Nevertheless, empirical studies on resistance, including those conducted in behaviour therapy, are scarce (Jahn & Lichstein, 1980). Resistance is generally viewed as a common phenomenon in psychotherapy. Several studies indicate, however, that patients' verbally expressed resistant behaviour occurs only seldomly during behavioural treatment. Kaimer et al. (1989) found that only 0.3% of patients' statements was resistant behaviour. Schindler et al. (1989) reported that resistant behaviour did not occur at all in the intake sessions. Van Bohemen (1987) studied twelve cases of controlled drinking. She again reported low levels of verbally expressed resistant patient behaviour, but also found that resistant behaviour increased during treatment. Resistant behaviour was found to be positively associated with the reduction of alcohol consumption.

Chamberlain, Patterson, Reid, Kavanagh, & Forgath (1984) developed an observation system (CRC) to assess the patients' resistant behaviour during parent training. Items included were interruptions, disagreements with the therapist, inattention, introducing new topics, etc. Twenty-seven distressed families were included in the study. Chamberlain et al. found that the resistant behaviour of patients increased from the first sessions to the middle sessions, and decreased again in the last sessions. The amount of decrease in resistant behaviour from the middle to the last sessions correlated positively with treatment outcome, and the number of resistant behaviour during the last sessions correlated negatively with treatment outcome. In addition, Chamberlain et al. found that significantly more high resistance families dropped out of treatment than low resistance families. The causal relationship between resistance behaviour during the course of treatment and treatment outcome (assessed by the therapists) is difficult to interpret. Chamberlain et al. warned that the CRC assesses certain interactional behaviour that was chosen on the basis of clinical experience and group discussion. Whether these interactional behaviour modes should really be considered as counterproductive to the achievement of therapeutic goals is unclear.

Though the empirical findings relating to the importance of patient's participation, motivation, and resistance are disappointing thus far, it appears that they result from our inability to grasp and define the concepts in a way that suits behaviour therapy practice. It is possible, for example, that patient's motivation, assessed using a quality or frequency registration of patients' compliance with homework assignments in an early phase of treatment, would offer a strong predictor of patients' behavioural treatment outcome. In one behavioural study, patients' compliance with homework assignments, rated by the therapists at the tenth session, was associated with treatment outcome (Mawson, et al, 1982). In another study involving 30 patients diagnosed with generalized anxiety disorders, the patients' daily homework monitoring proved unstable over the course of treatment and correlated nonsignificantly with behavioural treatment outcome. (Nelson & Borkovec, 1989). The real challenge in behaviour therapy is to learn to understand what exactly constitutes patient's participation in and motivation for treatment, and eventually to learn how to bring these conditions under therapeutic control.

Conclusions and Methodological Issues

From the above studies it can be deduced that behaviour therapists employ relationship skills as much as therapists from other orientations. There is no empirical evidence to suggest that behaviour therapists are more superficial, colder or more mechanical in their contact with the patients than therapists from other

psychotherapeutic orientations. The therapeutic relationship in behaviour therapy is characterized by a more active and directive stance on part of the therapists and higher levels of emotional support than are found in person-oriented psychotherapies. In addition, behaviour therapists express high levels of empathy and unconditional positive regard similar to those in person-oriented therapies.

Three clusters of interpersonal verbal behaviour have been identified as being associated with behavioural treatment outcome: For (1) the Rogerian therapist variables, empathy, nonpossessive warmth, positive regard, and genuineness, there is sufficient empirical evidence to suggest that these variables have a consistent, though moderate, impact on treatment results in behaviour therapy. (2) The patients' perception of the therapist as being self-confident, skillful, and active appears to be of some importance for behavioural treatment outcome, though it remains unclear how the patients' evaluations of the therapists' expertise are formed. Research findings relating to observed directive therapist behaviour, such as directive statements and advice, are scarce and inconsistent. Despite the problems of definition, (3) the cluster of patient's participation, motivation, and resistance also appears to affect behavioural treatment outcome. Other interpersonal verbal therapist and patient behaviours have been very little studied and inconsistent results have been obtained.

There is no general process model available in behaviour therapy that accounts for the above conclusions. In fact, the absence of a process model that could clarify the role of patient-therapist interaction, is one of the major methodological problems that hamper behaviour therapy process research. Because of the lack of an appropriate theoretical model many of the studies that have been carried out have been of an exploratory nature, encompassing too many interpersonal variables, involving too few subjects and having no specific instrument to assess the therapeutic relationship or patient-therapist interaction in behaviour therapy.

Based on the empirical studies reviewed above, we assume that, as in person-oriented psychotherapy, the therapeutic relationship in behaviour therapy serves some function in the patients' process of achieving change. Change in behaviour therapy, however, is not seen as the product of insight, but of successful attempts of behavioural change. The significance of the therapeutic relationship in behaviour therapy, therefore, can be conceptualized as follows: Within the contact with the patient, the therapists have to obtain their power to be able to influence the patients by means of attempts at direct behavioural change. This power stems from interpersonal psychological processes that operate within the patient-therapist contact. These processes have been studied extensively in the field of applied social-psychology (Johnson & Matross, 1977; Kanfer & Grimm, 1980; Schaap et al., 1993; Strong & Claiborn, 1982; Strong & Matross, 1973). Psychotherapy models derived from this research area can be used to explain the role of the patient-therapist interaction in behaviour therapy, and clarify the importance for behavioural treatment

outcome of the Rogerian therapist conditions, the perceived therapist expertness, and patient's participation, motivation, and resistance (Keijsers et al., 1990; Schaap et al., 1993; Strong & Matross, 1973).

There are a number of other methodological problems that have hampered process research in behaviour therapy. Some of them have already been outlined in the previous paragraph. In many studies self-report questionnaires have been used that have asked the therapists and patients to evaluate one another or the therapeutic relationship. There is some empirical evidence, however, to indicate that these self-report evaluations do not agree with the actual therapist and patient behaviour during the treatment (e.g., Elliott et al., 1982; Ford, 1978; Heppner & Heesacker, 1982; Heppner & Heesacker, 1983). Other findings also indicate that self-report questionnaires do not reflect the actual patient and therapist behaviour during treatment. There is, for example, little agreement between the therapists' evaluations and the patients' evaluations of the therapeutic relationship (e.g., Elliott et al., 1982; Lambert et al., 1978; Orlinsky & Howard, 1986), and the different subscales of self-report questionnaires tend to be highly intercorrelated and highly positively skewed when they are completed by the patients in an early treatment phase (e.g., Bennun & Schindler, 1988; Blaauw & Emmelkamp, 1991 ; Keijsers et al., 1991b; Keijsers, Hoogduin, & Schaap, 1992; LaCrosse, 1980; de Ruiter et al., 1989; Williams & Chambless, 1990). It has been suggested, therefore, that most patients initially view their therapists as being nice, skilled, and helpful, these perceptions primarily being reflective of the patients' a priori expectations and hopes at the beginning of treatment. They may remain unchanged as long as the therapists do not act in ways that contradict the patients' expectations (Corrigan et al., 1980; Keijsers et al., 1991b). Whatever the case, it is important to note that clear distinctions have to be made between the interpretation of self-report data and observed patient-therapist interactions, the former appearing to be primarily reflective of the extent to which expectancies of the treatment are confirmed by actual patient and therapist behaviour, the latter being more valid estimators of actual patient and therapist behaviours at a certain moment in time. Both types of instruments are important in the investigation of the therapeutic process.

Several methodological issues relating to observation instruments are also worth mentioning here. The results of a number of studies that used observation instruments and which have been discussed in Part I of the present chapter, are based on verbal behaviour frequencies. Though frequency ratings, as far as is currently known, appear to contain important information with regard to treatment process and outcome, other qualities of the therapeutic interaction, such as the length or the "impact" of an utterance, may conceal an even richer vein of information. Furthermore, the localization of a certain therapist or patient behaviour within a certain session raises

another methodological issue. The frequencies of most interpersonal patient and therapist behaviour modes appear to vary across different phases of treatment. It is possible that the impact of interpersonal therapist and patient behaviour on treatment outcome also depends on the treatment phase in which they occur. Specific interpersonal therapist or patient behaviour modes may be important at the beginning of treatment, but unimportant later on (e.g., Chiappone et al., 1981; Chamberlain et al., 1984; Ford, 1978; Gustavson et al., 1985; Kaimer et al., 1989; Kiesler & Watkins, 1989; Lambert et al., 1978). If this is true, several inconsistent findings in regard to interpersonal therapist and patient behaviour and treatment outcome can be accounted for. No systematic research has been carried out, however, that relates the importance of specific interpersonal therapist or patient behaviour for treatment outcome to specific treatment phases. Again, social-psychological social-influence models could be used to formulate hypotheses about the establishment of the therapeutic relationship during the course of treatment.

There is a last methodological issue that is worth discussing here. We have argued that relationship qualities affect behavioural treatment outcome. The important question is how behaviour therapists can profit from the knowledge gained from behaviour therapy process research. From a clinical point of view, instead of emphasizing relationship variables that facilitate behaviour therapy, it might be more interesting to focus on dissatisfying or unhelpful therapeutic interactions. The identification of dissatisfying or unhelpful therapeutic interactions early in treatment might offer us the opportunity to develop adjusted treatment strategies in these treatments, and enhance the quality of the therapeutic relationship. Knowledge of the patient-therapist interaction might eventually lead to a strategic management of the therapeutic relationship that takes into account patients' differing interpersonal needs or preferences. With the growing interest in personality psychopathology within behaviour therapy research, a match between personality psychopathology and interpersonal styles of relating may become an interesting subject (Keijsers, Schaap, Keijsers, & Hoogduin, 1990). On the other hand, a strategic management of the therapeutic relationship might be useful in enhancing outcome in those patients only who (or who's therapists) fail to establish a satisfying therapeutic relationship.

The Therapeutic Relationship in the Behavioural Treatment of Anxiety Disorders[1]

Summary

The present study investigated the prediction of behavioural treatment outcome by examining the quality of the therapeutic relationship early in treatment. Furthering our understanding of the critical relationship variables may be useful for intervening in unsuccessful treatment outcomes. Two self-report instruments were used to assess the patient-therapist interaction, the Relationship Inventory (RI) and the Therapist-Client Rating Scale (TCRS). The patients' evaluation of the quality of the therapeutic relationship assessed with the RI, correlated significantly with treatment outcome. The TCRS correlated nonsignificantly with treatment outcome. We conclude that the establishment of an accepting, empathic, and supportive therapeutic relationship, as perceived by the patient, is important for the progress of behaviour therapy.

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1 This chapter has been previously published: Keijsers, G., Schaap, C., Hoogduin, K., & Peters, W. (1991). The therapeutic relationship in the behavioural treatment of anxiety disorders. *Behavioural Psychotherapy, 19*, 359-367.

Therapeutic interaction can be considered a social process in which both participants continually influence one another. The therapist endeavors to reduce ineffective and inappropriate behaviour on the part of the patient and to stimulate appropriate behaviour (Strupp, 1977). This sort of influence is present in all forms of therapy, but the way in which change is brought about varies among therapeutic schools. In behaviour therapy, the therapist and the patient often discuss together what they are going to do during treatment and how they are going to do it. The therapist actively guides and gives direction. At the same time, the therapist is able to enter into a close relationship with the patient and to pick up the subtle communication coming from the patient (Wilson & Evans, 1977). An important question for therapeutic outcome is whether there are aspects of the interaction between therapist and patient that are essential to successful behavioural therapeutic treatment. A reliable and valid assessment of critical relationship variables in the beginning of treatment, would help us in intervening early in the patient-therapist interactions that are associated with poor treatment outcome.

This article reports on a study in which two self-rating instruments to assess relationship variables were used, the RI and the TCRS. The former instrument constitutes four subscales of the Dutch version of the Relationship Inventory (RI; Barrett-Lennard, 1962; Lietaer, 1976). According to Lietaer (1976), these four subscales, *empathy*, *positive regard*, *incongruence*, and *negative regard*, together serve as an indication of the Rogerian concept of a facilitative therapeutic relationship. The RI was completed by the patients and by the therapists. Although developed within a client-centered framework, significant correlations have been reported between the RI and behavioural treatment outcome (Emmelkamp & van der Hout, 1983; Hoogduin et al., 1989).

Bennun and Schindler (1988) used a rating scale that is also made up of a therapist-form and a patient-form. In both forms, the respondents are asked to describe the other according to 29 pairs of bipolar adjectives. Bennun and Schindler found significant positive correlations between the factors of the patient-form and the therapist-form and behavioural treatment outcome. This rating scale was translated into Dutch and named the Therapist-Client Rating Scale (TCRS; de Beurs & Lange, 1990). A recent study on the structure of the Dutch translation of the TCRS, however, failed to replicate the factors found by Bennun and Schindler (Keijsers et al., 1992). The factors for the patient-form found by Keijsers et al. were: *support*, *active expertise*, and *trustworthiness*; and the factors for the therapist-form were: *active participation*, *goal direction* and *attractiveness*. Internal consistency (Cronbach's α) of these factors ranged from .77 to .90.

The TCRS covers a broader range of therapist characteristics than does the RI. Furthermore, the TCRS and RI differ with respect to their therapist-form. With the

RI, the therapists evaluate their own ability to establish a facilitative therapeutic relationship, whereas with the TCRS, they evaluate the behaviour of the patient. The factors of the TCRS patient-form closely match findings of social-psychological research on social-influence processes in psychotherapy and counselling that indicate that the therapists derive their power to influence patients from three sources, i.d., perceived attractiveness, perceived expertise and perceived trustworthiness (Heppner & Dixon, 1981; LaCrosse, 1980; Strong & Claiborn, 1982; Strong & Matross, 1973).

This study sought to determine (1) the extent to which the RI and the TCRS are interrelated, and (2) whether the RI and TCRS can be used early in treatment to predict outcome.

Method

Patients

The sample consisted of 37 patients: 12 males (32%) and 25 females (68%), referred to a university outpatient clinic, specializing in the treatment of anxiety disorders. All patients presented anxiety complaints: 18 (49%) were diagnosed with panic disorder with agoraphobia, 10 (27%) with obsessive-compulsive disorder, 4 (11%) with social phobia, 3 (8%) with simple phobia, and 2 (5%) with generalized anxiety disorder.

Therapists

The therapists were nine graduate students in clinical psychology who had been trained in the treatment of anxiety disorders. Treatment was supervised by an experienced clinical psychologist and a psychiatrist, both behaviour therapists.

Assessment

The RI and TCRS were completed by the patients and therapists at the end of Treatment Sessions 3 and 10. The RI patient-form and the RI therapist-form contain 28 items; the TCRS patient-form contains 27 items, and the TCRS therapist-form contains 22 items. Both instruments are rated on a six-point scale. To reduce the likelihood of social desirability responses, we instructed patients to put the completed questionnaires in an envelope and to seal it. They were assured that their therapists would not be informed of their scores on the questionnaires.

The Symptom Check List-90 (SCL-90) was used as a means of measuring improvement. This questionnaire was filled in at the beginning of the treatment, at the end of the treatment, or at the end of the research period by patients who had twenty or more sessions. The SCL-90 is a general complaint list which has been validated and standardized for Dutch-speaking regions (Arrindell & Ettema, 1986), and is frequently used in therapy evaluation research.

Results

The sample of nine therapists and 37 patients does not strictly comprise of 37 independent therapist-patient ratings. Therefore, a one-way analysis of variance was conducted to investigate whether there were differences between the patients' SCL-90 ratings of each therapist[2]. The significance of these calculations were limited however, because four of the nine therapists treated only two patients. There were no significant differences in the SCL-90 pre- and postassessment ratings or improvement percentage (see below) between the therapists. Neither were there significant differences in RI-patient and TCRS subscales between the therapists. There were, however, significant differences between the therapists in the RI-therapist at Assessment 1 (F (8) = 3.21, $p < .05$) and at Assessment 2 (F (8) = 4.02, $p < .01$).

Neither the RI nor the TCRS items were normally distributed. The RI-patient scores, the RI-therapist scores, and the TCRS subscale scores did, nevertheless, approximate to a normal distribution (Kolmogorov-Smirnov test: $ps > .05$). Correlations were computed for the RI and the TCRS subscales between Assessment 1 and Assessment 2. These correlations are presented in Table 1.

	r	t	p
RI-patient	.77 **	-1.71	.10
RI-therapist	.56 **	-1.97	.06
Support	.77 **	-0.30	.77
Active Expertise	.58 **	-1.86	.08
Trustworthiness	.76 **	-1.23	.23
Active Participation	.45 **	-2.01	.05
Goal Direction	.67 **	-1.63	.11
Attraction	.67 **	-2.65	<.05

Table 1 RI and TCRS subscales: Pearson correlations between first and second assessment, t-statistics, and p-values, N = 37. Notes: * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

The RI and TCRS subscales of Assessments 1 and 2 all correlated positively significantly. T-tests were conducted to test for differences in the average scores between both assessments. A significant difference between Assessments 1 and Assessment 2 was found only for the TCRS-therapist subscale *attraction* (t = -2.65, p <.05), indicating that the therapists perceived their patients as being more attractive at Session 10 than at Session 3. No significant differences in the average scores of the RI and the other TCRS subscales between Assessment 1 and Assessment 2 were found.

2 All calculations were carried out with SPSSX (1990).

Table 2 presents the intercorrelations between the RI and the TCRS subscales at Assessments 1 and at Assessment 2. At Assessment 1, RI-patient correlated highly significantly and positively with the TCRS-patient subscales *support*, *active expertise* and *trustworthiness*. RI-therapist correlated highly significantly and positively with the TCRS-therapist subscales *active participation*, *goal direction* and *attraction*. It appears that in the third session, the TCRS subscales do not differentiate much in regard to the quality of the therapeutic relationship, assessed with the RI. This picture got somewhat blurred at Assessment 2; the correlations between the RI and TCRS decreased.

	Assessment 1						
	RI-p	RI-t	Support	Expert	Trustw	Particp	Goaldir
RI-t	.34*						
Support	.72**	-.12					
Expert	.56**	.01	.66**				
Trustw	.71**	-.06	.92**	.71**			
Particp	.34*	.65**	-.01	.27	.09		
Goaldir	.46**	.38*	-.04	.17	-.04	.59**	
Attract	.36*	.66**	-.07	.31	-.03	.81**	.48**
	Assessment 2						
	RI-p	RI-t	Support	Expert	Trustw	Particp	Goaldir
RI-t	.40*						
Support	.34*	.07					
Expert	.40*	.05	.55**				
Trustw	.37*	.01	.78**	.82**			
Particp	.22	.42**	.00	.03	.03		
Goaldir	.24	.31	-.02	-.07	-.06	.69**	
Attract	.37*	.39*	-.19	-.10	-.12	.61**	.34*

Table 2 RI and TCRS subscales: Pearson correlations in first and second assessment, $N = 37$. Notes: -p = patient-form, -t = therapist-form. The TCRS-patient factors are: support, active expertise, and trustworthiness. The TCRS-therapist factors are: active participation, goal direction, and attraction. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

The TCRS-patient subscales were highly positively intercorrelated at both assessments as were the TCRS-therapist subscales. Noteworthy are the moderate correlations between RI-patient and RI-therapist at both assessments. The patients' evaluations of their therapists' behaviour correlated only moderately with the therapists' own evaluations of their behaviour.

The percentage of improvement was calculated as follows: (SCL-90 preassessment - SCL-90 postassessment) / (SCL-90 preassessment - 89.5) X 100%. In this calculation the improvement percentage was adjusted to the minimum preassessment score. However, in order to prevent the scores of patients with a preassessment score of 90 being divided by zero, -89.5 was introduced into the denominator.

Means and standard deviations were 214.4 and 66.0 for SCL-90 preassessment, 171.7 and 60.0 for SCL-90 postassessment, and 34.9 and 34.4 for the improvement percentage. Only RI-patient at Assessment 1 ($r = .35$, $p < .05$) and at Assessment 2 ($r = .39$, $p < .05$) correlated significantly with the improvement percentage. RI-therapist and the TCRS subscales correlations with improvement failed to reach the .05 level of statistical significance. To replicate the Bennun and Schindler study (1988), we also computed TCRS subscale scores according to factorial structure found in their study and correlated these with the improvement percentage. Again, no significant correlations were found.

Discussion

The first aim of the present study was to investigate whether both therapeutic relationship instruments correlate. The present findings indicate that patients and therapists do only moderately differentiate between the particular patient and therapist interactional behaviour categories that are defined by the TCRS subscales. Therapists that are perceived as being supportive and trustworthy, tend also to be viewed as being experts, and patients that are perceived as being attractive, tend also to be viewed as participating or being goal-directed. These findings concur with previously reported high TCRS subscale intercorrelations (Bennun et al, 1986; Bennun & Schindler, 1988).

The correlations between the relationship questionnaires and the subscales decreased somewhat as treatment progresses. Patients and therapists perhaps become more able to differentiate between the patient and therapist interpersonal behaviours over the course of treatment, or several of the interpersonal behaviours become more important as treatment progresses, whereas early in treatment the establishment of a warm and supportive therapeutic relationship predominates.

The second aim of the present study was to investigate whether the relationship questionnaires predict treatment outcome. Contrary to the findings of Hoogduin et al. (1989), the RI-therapist correlated nonsignificantly with improvement. The therapists' view of the therapeutic relationship did not affect treatment outcome. It is possible, though, that the RI-therapist scores may be invalidated by differing therapist responses. The patients' evaluation of therapeutic relationship early in treatment, again contrary to the findings of Hoogduin et al. (1989), correlated significantly with treatment outcome. Patients reporting to be highly satisfied with their therapists,

tended to improve more. The patients' evaluation of the therapeutic relationship being a better predictor of treatment outcome than the therapists' evaluation, has been reported by others also (Gurman, 1977; Orlinsky & Howard, 1986). We conclude that in the first ten treatment sessions, the Rogerian therapist conditions, i.e. the establishment of an accepting, empathic, and supportive therapeutic relationship, as perceived by the patients, are important for the progress of behaviour therapy. Although we do not doubt that successful behavioural treatment can be accounted for by the use of powerful treatment techniques, nevertheless, it is important that behaviour therapists establish an accepting, empathic, and supportive relationship with their patients.

Contrary to the Bennun and Schindler study (1988), no significant correlations were presently found between the TCRS subscales and treatment outcome. These inconsistent findings may be due to the different instruments used to assess outcome and to the different calculations of improvement employed in both studies. Compared to the Fear Questionnaire used by Bennun and Schindler, the SCL-90 is a rather global measure of psychopathology. Firm conclusions on the utility of the TCRS to assess relevant relationship variables in behaviour therapy, therefore, can as yet, not be drawn.

We like to make a final comment on the use of self-report instruments for the assessment of relationship variables. Although the RI and TCRS subscales were approximately normally distributed, the items of these instruments were positively skewed. This tendency was also revealed in previous studies (Hoogduin, de Haan, Schaap, & Severeijns, 1988; Keijsers et al., 1992; LaCrosse, 1980). One can argue that the range of item response possibilities is too restricted. On the other hand, it might be possible that the positively skewed responses are reflective of a robust evaluation of the therapeutic relationship early in treatment that is caused by various social-psychological processes (e.g., high expectations, cognitive dissonance, halo-effect), and that is essential for the establishment of a warm and intimate therapeutic relationship. This would imply that the therapeutic relationship is evaluated positively in advance, that is, largely inherent to therapeutic situation where a distressed patient seeks help from an 'expert' to solve his or her problems. In regard to the question stated at the introduction of this article: 'How can we intervene in patient-therapist interactions in order to enhance treatment result?' we perhaps ought to concentrate less on high versus low RI or TCRS scores early in treatment, but rather investigate in which treatments the Session 10 evaluations of the therapeutic relationship have become more negative compared to the Session 3 evaluations. In addition, we feel that this study should be replicated using a homogeneous patient sample and a specific outcome measure, and with therapists possessing a greater range of experience.

6

Motivation for Psychotherapy: The Development of a Prediction Instrument[1]

Summary

Based on the literature, a brief self-rating questionnaire for measuring patient's motivation for psychotherapy was developed: the Nijmegen Motivation List (NML). The questionnaire was administered to 53 anxiety disorder outpatients, prior to their intake session. The patients' treatment consisted of relaxation, exposure and stress management. Pre- and postassessments were made using the Dutch version of the SCL-90. Factor analysis revealed three clearly interpretable factors which, however, failed to show any relationship to improvement percentage. By regression analysis of the separate NML items, however, 33% of the improvement percentage variance could be accounted for by six of the NML items. If these results were replicated in other studies and in other settings, it would mean that these six NML items could be used as predictive indicators for treatment outcome. Suggestions are made as to how the therapist could try, at an early stage in the treatment, to motivate the patients with low scores on these items.

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1 A Dutch version of this chapter has been previously printed: Keijsers, G., Hoogduin, C., & Schaap, C. (1991). Motivatie voor psychotherapie: De ontwikkeling van een predictie-instrument. *Gedragstherapie, 24*, 195-208.

It goes without saying that the patient's motivation for embarking on psychotherapeutic treatment is vital to the progress and success of the treatment. A motivated patient is more disposed to change than an unmotivated one, and more prepared to accept the treatment as a effective way of initiating change.

Since the 1960's, various attempts have been made to measure motivation for psychotherapy. In a number of research studies significant correlations have been found between motivation for psychotherapy and treatment outcome (Badura, 1976; Keithly, Samples, & Strupp, 1980; Kernberg et al., 1972; Rosenbaum & Horowitz, 1983; Sifneos, 1975). The research has been seriously hampered, however, by the problem of formulating a clear definition of motivation. The definition of the construct depended largely upon the school of therapy to which the researcher belongs. This is not surprising; the notion "motivation for psychotherapy" requires that the researcher be very precise about what sort of changes need to be brought about in the patient and how this can be achieved through the treatment. Thus Sifneos (1975) developed a questionnaire to measure the patient's motivation for dynamic-oriented psychotherapy. He stated that motivation for psychotherapy implies that the patient not only seeks to reduce the symptoms, but explicitly wants to change.

- Level of distress	- Treatment fee
- Acknowledging the problem	- Secondary gain
- Desire to change	- Self-motivation
- Willingness to make reasonable sacrifices	- Openness
- Degree of autonomy	- Curiosity to understand oneself
- Compliance with patient role	- Interpersonal attraction
- Ability to recognize that symptoms are psychological	- Self-confident about one's abilities
- Introspection	- Attitude towards psychotherapy
- Honesty	- Demographic variables
- Expectations for treatment	- Stigmata tolerance
- Active participation	- Perseverance (frustration tolerance)

Figure 1 Factors considered to constitute patient motivation (Kersten, Hoogduin, Schaap, 1988).

A questionnaire specifically designed to measure the patient's motivation for behaviour therapy has, as far as we know, never been developed. Attempts have been made, though, to develop a motivation questionnaire which would be suited for all types of therapy (de Moor & Croon, 1986; Rosenbaum & Horowitz, 1983). In these research studies, motivation for psychotherapy was considered an important, nonspecific therapy factor. Here too, however, the definition of motivation proved a stumbling block. How can motivation for psychotherapy be distinguished from other

nonspecific therapy factors such as the patients' attitude towards psychotherapy, their expectations of the treatment and the therapeutic relationship (Moor & Croon, 1986)?

Kersten et al. (1988) presented a survey of the major factors given in the literature, that were considered to constitute the concept of patient's motivation for psychotherapy. These factors are presented in Figure 1. The figure clearly shows that the views on patient's motivation for psychotherapy, put forward by researchers, vary largely.

The factors that constitute patient's motivation have, in most of the studies, been determined by interviews with psychotherapists. Duivenvoorden (1982), therefore, carried out research into the way in which the therapists' assessment of the patient's motivation was formed. He designed a questionnaire, the Beoordeling Motivatie Therapie (BMT) [Assessment of Motivation for Therapy], that included a large number of patient variables and process variables that possibly contributed to therapists' evaluation of patient's motivation. A total of 281 patients were included in Duivenvoorden's study. The assessors were psychoanalysts, system therapists, client-centered therapists and behaviour therapists. They assessed the patients with the BMT. Duivenvoorden found that the following factors were instrumental in forming the therapist's evaluation of the patient's motivation:

a) the patient's need for insight into the way he functioned and his interest in the origination and maintenance of the problems;
b) ego strength;
c) an open and stable character; and
d) interpersonal attraction.

One may feel that most of these are very doubtful factors in the notion "motivation for psychotherapy". Indeed, on the basis of this study one would be tempted to conclude that the better the patients function and the more attractive they are found to be, the more motivated they appear. Rosenbaum and Horowitz (1983) also came to the conclusion that various factors considered to constitute patient's motivation for psychotherapy said more about the patients' suitability for psychotherapeutic treatment than about their motivation for treatment. According to Rosenbaum and Horowitz, suitability for treatment would primarily play a role in dynamic-oriented psychotherapy only.

Besides the problem of defining the concept, a further difficulty arises when we ask what purpose measuring motivation for psychotherapy should serve. It is assumed that motivation for psychotherapy, if it can be reliably assessed, has a predictive value with regard to treatment outcome. But with what aim in mind should one want to assess this? On the one hand, this predictor can be used as a selection criterion: When the patient's motivation for psychotherapeutic treatment is weak, there is no point in spending time and trouble on them. Certainly when the assessment of motivation is based on doubtful criteria, patients who lack introspective abilities at

their disposal or who are considered a nuisance, unattractive or stupid will be denied psychotherapeutic treatment. At the same time it strikes one that motivation is being perceived here as a static commodity: An unmotivated patient cannot be motivated and a motivated patient will remain motivated.

On the other hand this predictor can be used to alter the treatment strategy. After measuring the factors that constitute patient's motivation for treatment, one can attempt to increase the motivation for treatment, by using a strategy specifically geared to particular factors. The treatment can thus be formulated such that these negative factors are obviated (Miller, 1985). We chose such an approach. We designed a questionnaire which would measure a number of potential prognostic factors, the aim being to use such an instrument to alter treatment strategy and to improve the chances of successful treatment outcome.

1. My complaints make me profoundly unhappy.
2. Despite my complaints I can function well in daily life.
3. I will do anything to get rid of my complaints.
4. Because of my complaints I cannot meet a number of essential commitments.
5. Because of my complaints a number of people is extra nice to me.
6. Actually, I embarked upon therapy on the insistence of other people.
7. I expect to benefit more from therapy if I actively participate in it.
8. I keep my appointments, no matter what.
9. I'm not very optimistic about the outcome of the course of treatment I'm about to follow.
10. Actually, I think that my complaints have a physical cause.
11. The cause of my complaints lies primarily in my circumstances.
12. I'm known as someone who perseveres.

Figure 2 The NML items.

A short motivation questionnaire, consisting of seven items, was used in Hoogduin's (1986) study. The following factors were included: (1) willingness to make sacrifices/ willingness to participate, (2) initial level of distress, and (3) secondary gain derived from illness. In Hoogduin's study, 60 obsessive-compulsive patients were treated with exposure and response prevention. The questionnaire was completed by the therapist at the beginning of treatment. Besides motivation, six other psychological variables were measured. Patient's motivation was the only psychological variable that could differentiate the group of patients who benefitted from treatment from those who did not. Following a study of the literature relating to motivation for psychotherapy (Kersten et al., 1988) five new items were added to this questionnaire and it was made into a self-rating scale to be filled in by the patient. This new version of the questionnaire was called the Nijmegen Motivation List (NML), and was used in the present study.

The NML is a clinical instrument intended to measure patient's motivation for psychotherapy. The twelve items are made up of statements which are rated by the patient on a five-point scale ranging from "completely applicable to me" to "not at all applicable to me". Suitability variables are not encompassed by this questionnaire. The items are given in Figure 2.

The present article reports on our findings using this instrument in patients treated with behaviour therapy. First, the structure of the NML is investigated, then the extent to which the NML has predictive value with regard to behavioural treatment outcome is explored. The following questions were posed: (1) "Is the NML made up of a number of distinct factors?", (2) "If so, do these factors, at an early stage of behavioural treatment, predict an improvement score? If not, is it possible to predict an improvement score with a number of the NML items, early in the treatment? And if so, which items?"

Method

Patients

The NML was completed by 53 outpatients diagnosed as having anxiety complaints, predominantly obsessive-compulsive disorder and panic disorder with or without agoraphobia. The patient group was made up of 32 females and 21 males. The sample ranged in age from 17 to 65 (M = 36.0, SD = 9.6). Thirty-five percent had received technical and vocational training for the age-group 12-16; Twenty-nine percent had continued this form of education up to age 18; Thirty-six percent had either continued this form of education beyond age 18 or had a university education. The treatment consisted of an average of 26 one-hour sessions.

Therapists

Treatment was undertaken by eleven graduate students in clinical psychology who had been trained in the treatment of anxiety disorders. Treatment was supervised by an experienced clinical psychologist, a behaviour therapist, and a psychiatrist.

Assessments

The NML was sent to the patients, with the request to bring the completed questionnaire with them to their intake session. The Symptom Check List 90 (SCL-90) was used as a means of measuring improvement. This questionnaire was filled in at the beginning of the treatment, at the end of the treatment or at the end of the research period by patients who had twenty or more sessions. The SCL-90 is a general complaint list which has been validated and standardized for Dutch-speaking regions (Arrindell & Ettema, 1986), and is frequently used in therapy evaluation research. One possible objection to this instrument, however, is that it may well not

be sensitive enough to detect the therapeutic effects of forms of treatment which aim at influencing specific complaints.

Results

The structure of the NML

The Kolmogorov-Smirnov test[2] was carried out in order to ascertain which items approximated to a normal distribution. Only Item 6 appeared to have a normal distribution; the other items were skewed. It was also investigated whether there were any significant differences between the women's and the men's scores on the individual items, but this proved not to be the case. The differences between the average scores of men and women were nonsignificant on any of the items (Mann-Whitney; *ps* > .05). Interitem correlations were calculated using tetrachoric correlations (Table 1). The NML items were dichotomized by the median. The average interitem correlation was .27.

	1	2	3	4	5	6	7	8	9	10	11
2	-.64**										
3	.04	.06									
4	.42*	-.73**	.10								
5	.40**	-.02	.02	.12							
6	.44**	-.15	.20	.15	.32						
7	-.01	-.03	.31	.09	.29	-.10					
8	.08	.06	.49**	.03	-.03	.09	.36				
9	-.07	.31	-.51**	-.03	-.13	.14	-.65**	-.56**			
10	-.13	.29	-.19	-.34	-.29	-.02	-.54**	-.48**	.40		
11	.42**	-.26	.13	.34	.58**	.55**	-.22	-.51**	.50**	.34	
12	-.20	.08	.12	.22	.41*	.04	.42*	.52**	-.05	-.29	-.01

Table 1 Tetrachoric correlations between NML items, $N = 53$. Notes: * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

A principal factor analysis with iterations and varimax rotation was conducted on the tetrachoric correlation matrix. It was decided to use a three-factor model. This was done in order to limit the number of factors in the twelve items and because three factors were expected (Hoogduin, 1986). The three-factor model yielded clearly interpretable results.

2 Tetrachoric correlations and factor analyses were carried out with the statistical package KUNST (Bendermacher, 1981). For all other computations SPSSX (1990) was used.

The first factor was formed by the Items 3, 7, 8, 9, 10, and 12. This factor can best be labeled as *willingness to participate.* The items relate to the patient's keeping appointments, expectation of the treatment, preparedness to make sacrifices and perseverance. This factor accounted for 23% of the variance. The second factor can best be labeled as *level of distress* and consisted of the Items 1, 2 (reversed direction), and 4. This factor accounted for 19% of the variance. The third factor consisted of the remaining three items, Items 5 (reversed direction), 6, and 11, which together accounted for 18% of the variance. On first glance these items appear to have nothing to do with one another. However, all three items say something about the connection between the patients' complaints and those close to them. There is a significant positive correlation between them and Item 1 "My complaints make me profoundly unhappy." (*ps* < .01). It seems likely that this factor reflects the *pressure* exerted on the patient *by other people.* The internal consistency of the three factors were calculated on the basis of the dichotomized items. The values found were low: for Factors 1, (with Item 10 eliminated), 2, and 3 KR-20 came out as $\alpha = .53$, $\alpha = .60$, and $\alpha = .66$ respectively.

It was investigated how these factors related to other patient variables such as age at intake, duration and severity of complaints and level of education. On construction of the scale the items could not be multiplied by the factor scores since exact factor scores cannot be obtained from a tetrachoric correlation matrix. Instead, the scores on the dichotomized items of each of the scales were added up per patient. Item 10 was omitted. The findings are given in Table 2.

	F1	F2	F3
Age[a]	$r = -.02$ $p = .89$	$r = .16$ $p = .30$	$r = -.15$ $p = .32$
Sex[b]	$t\ (50) = .79$ $p = .44$	$t\ (50) = -1.55$ $p = .13$	$t\ (50) = .50$ $p = .62$
Education[c]	$F\ (50) = .84$ $p = .48$	$F\ (50) = 4.93$ $p < .01$	$F\ (50) = .14$ $p = .94$
Duration of complains[a]	$r = .16$ $p = .27$	$r = .43$ $p < .01$	$r = .24$ $p = .11$
SCL-90 prescore[a]	$r = .07$ $p = .64$	$r = .82$ $p < .01$	$r = -.12$ $p = .43$

Table 2 Associations between *willingness to participate* (F1), *level of distress* (F2), and *pressure from relevant others* (F3) and patient variables, $N = 53$. Notes: (a) = Spearman correlations were calculated. (b) = t-tests were employed. (c) = One-way analysis of variance was employed.

Level of distress was significantly related with duration of complaints and severity of complaints (SCL-90 prescore). Furthermore, patients with a higher level of education had a significantly lower average on the factor *level of distress*. All other calculations were nonsignificant.

The predictive value of the NML

On the basis of SCL-90 pre- and postscores, an improvement percentage was calculated for each patient. This was done as follows: (prescore - postscore) / (prescore - 89.5) X 100%. In this calculation the improvement percentage was adjusted to the minimum prescore score. However, in order to prevent the scores of patients with a prescore of 90 being divided by zero, -89.5 was introduced into the denominator.

A t-test was used to determine whether the SCL-90 prescore and SCL-90 postscore differed significantly. This indeed appeared to be the case (t (51) = 8.81, p < .01). The differences between the averages of men and women on the SCL-90 prescore (t (50) = -1.55, p = .13), postscore (t (50) = -1.42, p = .16) and improvement percentage (t (50) = 1.11, p = .27) were nonsignificant.

To investigating the predictive value of the items, first Spearman *rho* correlations were calculated between the improvement percentage and the individual NML items. One patient with a strongly deviating negative score on the improvement instrument was excluded from the sample. The results are presented in Table 3.

Item	r	Item	r	Item	r
NML01	-.16	NML05	.22	NML09	.12
NML02	-.21	NML06	.10	NML10	-.09
NML03	-.32*	NML07	.10	NML11	.19
NML04	.32*	NML08	-.16	NML12	-.02

Factors	r
Willingness to Participate	-.18
Level of Distress	-.20
Pressure from Relevant Others	-.16

Table 3 Spearman correlations between improvement percentage and NML items and factors, N = 52. Note: * p < .05, two-tailed.

Significant correlations with improvement percentage were found for Items 3 and 4. The correlations with the three factors were also calculated, but none of them correlated significantly with the improvement percentage. It was to be expected that

regression analysis would also show the three factors to have no predictive value in relation to improvement percentage. None of the factors added significantly to the regression model (*willingness to participate*: $\beta = -.11$, $t = .78$, $p = .44$; *level of distress*: $\beta = .07$, $t = -.05$, $p = .61$; *pressure from relevant others*: $\beta = .23$, $t = 1.67$, $p = .10$).

A second regression analysis was carried out, this time taking the NML items separately. In order to limit the number of independent variables, three items (7, 8, and 10) were omitted prior to the analysis on the basis of weak interitem correlation and weak correlation with improvement percentage. The other items, together with the patient's sex, were entered into the regression analysis as independent variables. Items 1, 2, 3, 4, 5 and 9 appeared to add significantly to the regression model. Herzberg's adjusted multiple correlation coefficient (Stevens, 1986) came out as .33. The results are given in Table 4.

Multiple R		.76	
R Square		.58	
Herzberg R		.33	
Standard Error		23.00	
Variable	ß	t	p
Sex	-.20	-1.80	.08
NML11	-.12	-0.97	.34
NML03	-.46	-4.23	.00
NML12	-.10	-0.90	.38
NML02	-.29	-2.19	.03
NML06	-.15	-1.20	.24
NML09	.31	2.60	.01
NML01	-.43	-3.61	.00
NML04	.27	2.12	.04
NML05	.43	3.17	.00
Constant		3.62	.00

Table 4 Regression-analysis; dependent variable: improvement percentage; independent variables: sex, NML items 1, 2, 3, 4, 5, 6, 9, 11, and 12, $N = 52$.

Only the Items 1, 2, 3, 4, 5, and 9 were included in a third and final regression analysis. Once again, all items appeared to add significantly to the regression model. This time, the adjusted correlation coefficient was .38. We tested whether the last two regression models differed significantly from each other. This appeared not to be the case (F (41) = 2.42, $p < .01$), indicating that Items 6, 11, and 12 added nothing to the last regression model obtained.

Discussion

The structure of them NML was investigated and, using factor analysis, three factors could be differentiated: *willingness to participate*, *level of distress*, and *pressure from relevant others*. The notion "secondary gain derived from illness" (Hoogduin, 1986) was not discerned upon factor resolution. Though these findings are theoretically interesting, the internal consistencies of the factors are low. This is not strange, given the small number of items per scale. If we really wanted to design a multidimensional motivation questionnaire, it would be necessary to increase the number of items. Nevertheless, the conclusion that "motivation for psychotherapy", as measured by the NML, is not mono-dimensional seems well-founded. This accords with earlier findings (Badura, 1975; Kersten, et al., 1988; De Moor & Croon, 1987; Rosenbaum & Horowitz, 1983).

With regard to the predictive value of the factors identified, the results are disappointing. None of the factors contributed significantly to the prediction of the improvement percentage. This requires some explanation. Regarding the first factor, *willingness to participate*, half the variables showed absolutely no correlation with the improvement percentage; they only cause interference. The same more or less applies to the third factor, *pressure from relevant others*: Item 6 barely correlates with improvement percentage.

In contrast to the first and third factors, the items of the second factor *level of distress*, do all seem to be related to improvement percentage. The factor itself, though, does not. Were we, however, to reverse the polarity of Item 2 (negative factor loading) - "Despite my complaints I can function well in daily life" - the factor would correlate significantly with improvement percentage. In other words, a high level of distress relates to improvement, but the level of distress must not be so high that the patient is no longer able to function in daily life.

The high correlation between the factor *level of distress* and the severity of the complaints, as measured by the SCL-90 prescore, gives rise to renewed questions about the construct motivation for psychotherapy. To what extent can, for example, *level of distress* and severity of complaints - possibly in combination with duration of complaints - be further differentiated?

Since it appeared impossible to predict improvement percentage on the basis of the factors identified, without eliminating items or reversing their polarity, the items were entered separately into a regression analysis. Six NML items could account for 33% of the improvement percentage variance. These items are given here, along with some comments on their significance with regard to treatment outcome.

Item 1: "My complaints make me profoundly unhappy". When patients are weighed down by their complaints, the treatment outcome is better. The finding that *level of distress* has predictive significance for treatment outcome concurs with the

results of several other studies (Duivenvoorden, 1982; Keithly et al., 1980; Miller, 1985; De Moor & Croon, 1987; Rosenbaum & Horowitz, 1983).

Item 2: "Despite my complaints I can function well in daily life". When patients agree with this statement the improvement percentage is higher. As stated above, the relationship between *level of distress* and a high improvement percentage is not simple or direct. The patient feels deeply unhappy because of his complaints, but must, at the same time, be able to function in life.

Item 3: "I will do anything to get rid of my complaints". The improvement percentage is higher when the patient is prepared to do anything to get rid of his complaints. The willingness to invest time and energy in the treatment is seen as an important predictive criterion by various authors (Duivenvoorden, 1982; Krause, 1967; Rosenbaum & Horowitz, 1983; Sifneos, 1975).

Item 4: "Because of my complaints I cannot meet a number of essential commitments". When the patients' complaints prevent them from meeting their commitments, this is a favourable indication for treatment outcome. This item was originally intended to measure secondary gain derived from the illness, but relates much more strongly to level of distress. The patient can no longer meet him commitments and is in danger of losing control over his life.

Item 5: "Because of my complaints a number of people is extra nice to me". It is striking that 57% of the 53 patients in this study responded "does not apply to me" or "does not apply to me at all" to this. When patients feel that, because of their complaints they are definitely not treated more kindly by other people (median value is 4), this is a favourable predictive sign. Possibly when patients are treated more kindly by others, there is some "secondary gain" involved. Given the way in which the item is dichotomized and the positive correlation between Items 1 and 5, however, this explanation does not seem likely: When patients are treated less kindly, they experience a higher level of distress.

Item 9: "I'm not very optimistic about the outcome of the course of treatment I'm about to follow". When patients completely disagree with this statement (median value is 4), this is a favourable indication for treatment outcome. Other studies have also found that expectations of treatment affect treatment outcome (Garfield, 1986; De Moor & Croon, 1987; Sifneos, 1975, Emmelkamp & Wessels, 1975, Mathews et al., 1976).

The other NML items appears to have no appreciable contribution to make towards the prediction of improvement percentage. That does not necessarily mean that these indicators are unimportant. Since regression analysis draws on the unique contribution of each independent variable, it is possible that the contribution of a particular item was masked in the regression comparison by the correlation between this item and the rest of the NML items.

Implications for treatment

If, for the moment, we take these finding as true, this means that specific interventions can be set up for a number of NML items, thus increasing the chance of complaint reduction as a result of behavioural therapeutic treatment. Some examples would be:

When the patient says, in response to Item 1, that his complaints do not bother him, then an intervention aimed at increasing the level of distress may be suited to enhance patient's motivation. The therapist can talk at length about the patient's diminished quality of life: 'You've no life like this. You're lacking all control over your anxieties. At the moment you have absolutely no guarantee that things won't get a lot worse in the future." Item 2, on the other hand, can indicate that the therapists must not seek to raise the level of distress, but should aim rather at increasing the patient's feeling of control. The therapists provide careful information about the nature of the complaints and, throughout the treatment, offer plenty of structure and pay a lot of attention to classifying and naming the problems. They suggest a step by step approach, and first tackle a complaint that can be expected to respond to therapy within a relatively short time.

If, in response to Item 3, patients show that they are unwilling to invest time and energy in the treatment, here too, specific interventions can be employed to change the attitude. The patients are praised for the difficult step they have taken in embarking upon therapy. The therapists can go into great detail about what the patients can expect from the treatment. They can tell them that the treatment will be difficult, but not beyond what they are capable of; that, in the early stages, their complaints might even increase, but that, from this moment on, all the pain will at least be leading towards their ridding themselves of the problems. They've got nothing to lose by undergoing treatment; their life is hardly a barrel of laughs anyway and they're suffering for nothing. The moment has come to really grasp the nettle.

Finally, some remarks on the results are presented here: First, it is important to note that the data given here is tentative. Given the number of independent variables in the regression analysis, the number of patients was small. Even though the multiple correlation coefficient was adjusted for capitalization on chance, only a replicated study can show whether the combination of items found in this study is indeed generalizable to other populations.

Second, it is again important to note that we used a self-rating scale to measure indicators for treatment outcome. In other studies, with the exception of that of Badura (1975), the patient's motivation was assessed by the therapist or by an independent assessor. An important advantage to be gained from the early completion of this self-rating questionnaire is that it limits the effect of patient-therapist interaction. Indeed, the patients complete the questionnaire themselves, before any

meeting has even taken place. On the other hand, there is the danger of response tendencies: It is obvious that an item such as "I expect to benefit more from therapy if I actively participate in it" is liable to elicit a response based on what is socially desireable. Though this problem was partly avoided presently by dichotomizing the items, the items need improvement in this respect.

Third, a choice has to be made regarding the further development of the instrument. On the one hand, future research could center on the construction of a number of NML subscales. As stated earlier, the number of items would then have to be increased. On the other hand it might be decided to replicate this study in other settings, retaining the items with a high predictive value and eliminating the others. In that case, the NML could no longer be regarded as a motivation questionnaire, but as an instrument for measuring a number of predictive criteria for treatment outcome.

7

Patient-Therapist Interaction in the Behavioural Treatment of Panic Disorder with Agoraphobia[1]

Summary

Though effective behavioural techniques have been developed, it is largely unknown what aspects of the patient-therapist interaction constitute the patients' acceptance of the influence and directives of the therapist. In the present study, several hypotheses were tested, derived from social-psychological models of social-influence. It was hypothesized that the interaction between patient and therapist develops over several phases. Further, the associations between verbal patient and therapist behaviour modes and treatment outcome were expected to alter, due to developments in therapist-patient interaction over the course of treatment. Thirty patients diagnosed with panic disorder with agoraphobia, were treated with a standardized behavioural treatment programme of 12 sessions. The interpersonal verbal therapist and patient behaviour modes were studied at Sessions 1, 3, and 10, with the use of an observational instrument. It was found that the percentages of verbal therapist and patient behaviour modes change over the course of treatment, in line with predictions derived from social-psychological models. The hypothesis that the establishment of the therapeutic relationship requires an empathic and nondirective stance of the therapist in Session 1 was partly confirmed. The hypothesis that in Session 3 directive statements, but not empathic statements are positively associated with treatment outcome, was not confirmed.

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1 Parts of this chapter have been previously published: Keijsers, G.P.J., Schaap., C.P.D.R., Hoogduin, C.A.L., & Lensen, J.M.C. (1992). De cliënt-therapeut interactie binnen gedragstherapie: Een gefaseerd proces. In C.P.F. van der Staak & C.A.L. Hoogduin (Eds.), *Persoonlijke relaties en psychopathologie* (pp. 99-110). The chapter has currently been accepted for publication in *Behavior Modification*. Authors: G.P.J. Keijsers, C.P.D.R. Schaap, C.A.L. Hoogduin, and M.W. Lammers. We gratefully acknowledge the assistance of Mirjam Lammers, Janine Lensen, Janneke Mes, Elke Voeten, and Caroline Vossen in coding the audiotapes.

Historically in behaviour therapy, research has focussed on the development and testing of behavioural treatment techniques to reduce maladaptive behaviour. Behaviour therapists have sought to directly influence the symptoms and complaints patients present, thus rejecting the need of patients' detailed exploration of their inner needs, conflicts or fears. Without the need for patients' inner exploration, characteristic of many other forms of psychotherapy, theoretical elaborations on the therapeutic process did not seem to fit the straightforward, solution-oriented approach, advocated by behaviour therapists.

Only recently behaviour therapy researchers have acknowledged that treatment techniques alone do not guarantee treatment success. Techniques are embedded in a complex social relationship (Linehan, 1988; Schaap et al., 1993; Sweet, 1984; Wilson & Evans, 1977). Behaviour therapists are constantly involved in a process of informing and preparing patients for a treatment programme, of motivating patients and keeping them motivated, of enhancing their compliance, and of establishing a relationship in which patients feel understood and respected (Kanfer & Grimm, 1980; Miller, 1985; Schaap et al., 1993; Schindler, 1988). A better understanding of the aspects of the patient-therapist interaction that constitute the patients' acceptance of the influence and directives of the therapist, may eventually lead to new therapeutic strategies to enhance behavioural treatment results.

In the first part of the introduction section, empirical studies are briefly reviewed that have been conducted over the past twenty years, addressing the impact of interpersonal therapist and patient behaviour on behaviour therapy outcome. Three methodological issues are outlined that hamper behaviour therapy process research. In the following section a social-psychological model is proposed for the patient-therapist interaction in behaviour therapy. Hypotheses, derived from the model are drawn (a) in regard to the frequencies of interpersonal therapist and patient behaviour modes during the course of treatment, and (b) in regard to the impact of several interpersonal therapist and patient behaviour modes on treatment outcome.

Empirical Studies

There is persuasive empirical evidence available that suggests that the most extensively studied therapist variables, i.e., *empathy, nonpossessive warmth, positive regard,* and *genuineness,* assessed early in treatment, have an impact on behavioural treatment outcome (Alexander et al., 1976; Arts et al., 1994; Bennun & Schindler, 1988; Chiappone et al., 1981; Ford, 1978; Hoogduin et al., 1989; Keijsers et al., 1991b; Williams & Chambless, 1990). Studies on patients' retrospective evaluations of their treatment suggest that patients consider the relationship with their therapist very helpful (Llewelyn & Hume, 1979; Ryan & Gizynski, 1971; Sloane et al., 1977). Furthermore, patients that report experiencing their therapists as understanding and respectful, improved the most (Bennun et al., 1986; Emmelkamp & van der Hout,

1983; Rabavilas, Boulougouris, & Perissaki, 1979; Sloane et al., 1977).

Other therapist behaviour modes, such as support, directiveness, providing advice, interpretations, confrontations, and self-disclosure have been scarcely studied in behaviour therapy. Although it appears that *supportive statements*, such as minimal encouragement, reassurance, approval, and praise occur fairly often in behaviour therapy (Brunink & Schroeder, 1979; Hardy & Shapiro, 1985), no significant correlations with behavioural treatment outcome have been reported (Keijsers et al., 1991b; Gustavson et al., 1985). In two studies using sequential analyses, it was found that therapists supportive statements followed or preceded by certain verbal behaviour categories of the patients were related to behavioural treatment outcome (Kaimer et al., 1989; Schindler, 1988). It is possible that therapists supportive statements, though not associated with a beneficial treatment outcome in itself, may be applied by the therapists to elicit patient responses that affect outcome.

Compared with person-oriented psychotherapists and psychodynamic therapists, behaviour therapists are reported to provide more *directive guidance*, more *advice*, more *information*, more *structure*, and *to talk* more during sessions (Brunink & Schroeder, 1979; Hardy & Shapiro, 1985; Raue et al., 1992; Sloane et al., 1975; Stiles et al., 1988; Wogan & Norcross, 1985). However, the directive statements and advice do not constitute a large proportion of the behaviour therapists' verbal behaviour, approximately 10%. Sloane et al. (1977) found that patients that improved substantially considered the practical advice of their therapist very helpful. Also, patients' perception of the therapists' expertness (Bennun & Schindler, 1988; Heppner & Heesacker, 1983; LaCrosse, 1980), self-confidence (Williams & Chambless, 1990), and directiveness (Bennun & Schindler, 1988) are reported to be positively correlated with treatment outcome. The latter, however, was negatively associated with behavioural treatment in one study (Emmelkamp & van der Hout, 1983), and nonsignificantly correlated with behavioural treatment outcome in two other studies (Blaauw & Emmelkamp, 1991; Keijsers et al., 1991b).

Interpretations and *confrontations*, not particularly favoured by behaviour therapists, nevertheless seem to occur with some frequency. Percentages of occurance between 4% and 14% for interpretations have been reported (Brunink & Schroeder, 1979; Hardy & Shapiro, 1985; Stiles et al., 1988). Research data on the impact of confrontations and interpretations on treatment outcome in behaviour therapy are not available.

Therapist *self-disclosure* seems rather uncommon in behaviour therapy. Percentages of occurance of 2.1% (Brunink & Schroeder, 1979), 1.6% (Hardy & Shapiro, 1985), and 5% (Stiles et al., 1988) have been reported. The scarce empirical data do not suggest that therapist self-disclosure is of importance for treatment outcome (Alexander et al., 1976; Llewelyn & Hume, 1979; Orlinsky & Howard, 1986).

There are few studies on the interpersonal patient behaviour in behaviour therapy. Further, in psychotherapy process research in general, there also is no consensus as to which of the interpersonal patient behaviour modes might be considered important for treatment outcome (Orlinsky & Howard, 1986). Several studies suggest that the patients verbal behaviour during treatment consists of 60% to 70% of *problem descriptions* and *self-disclosing remarks* (Schaap et al., 1993; Schindler, 1988; Stiles et al., 1988). In one study, it was found that patient self-disclosure, assessed after the second session, was correlated positively with treatment outcome (Bennun & Schindler, 1988). In three other studies, however, no significant correlations with treatment outcome were found (Blaauw & Emmelkamp, 1991; Kaimer et al., 1989; Keijsers et al., 1991b). In the study of Kaimer et al. (1989) the interpersonal verbal therapist and patient behaviour modes of a successful and a failed case were compared. It was found that the successfully treated patient showed significantly more problem descriptions and significantly fewer short answers.

Patients' *active participation*, *motivation for treatment*, and *resistant behaviour* form a final cluster of interpersonal patient behaviour modes that have been regarded as important in most forms of psychotherapy. The three concepts are, however, little understood. Patient participation refers to the patients acceptance of their role in the psychotherapeutic process and their subsequent behaviour. Kaimer et al. (1989) failed to show a significant difference in the number of cooperative statements of a successfully and unsuccessfully treated patient. Schindler et al. (1988) found that cooperative statements of the patients followed or preceded by supportive statements of the therapist, occurred significantly more often in successfully treated patients.

Motivation for treatment refers to the patients' disposition to participate in treatment. Rated by the therapists, patient's motivation was significantly correlated with behavioural treatment outcome in one study (Hoogduin & Duivenvoorden, 1988), but nonsignificantly associated with behavioural treatment outcome in four other studies (de Beurs, 1993; Mathews et al., 1974; Mathews et al., 1976; Mawson et al., 1982). Rated by the patients, patient's motivation was found to be significantly correlated with behavioural treatment outcome in one study (Keijsers et al., 1991a).

Verbally expressed resistant behaviour does not seem to occur often in behaviour therapy. Kaimer et al. (1989) found that only 0.3% of patients' statements was resistant behaviour. Schindler et al. (1989) report that resistant behaviour did not occur at all in the intake sessions. Chamberlain et al. (1984) found that resistant behaviour of patients increased from the first sessions to the middle sessions and decreased again in the last sessions. The amount of decrease in resistant behaviour from the middle to the last sessions correlated positively with treatment outcome, and the number of resistant behaviour during the last sessions correlated negatively with treatment outcome.

In conclusion, only for the Rogerian therapist variables, empathy, nonpossessive warmth, positive regard, and genuineness, is there sufficient empirical evidence available that suggests that these variables have a consistent, though moderate, impact on behavioural treatment outcome. Other interpersonal verbal therapist and patient behaviour modes have scarcely been studied and inconsistent results have been produced.

Three methodological problems may account for the current state of affairs of behaviour therapy process research. First of all, no general process model in behaviour therapy has been developed that clarifies the patient-therapist interaction and direct empirical research. Consequently, many studies that have been conducted are of an exploratory nature, comprising too many interpersonal variables, too few subjects and no specific instrument to assess the therapeutic relationship in behaviour therapy.

Second, in many studies self-report questionnaires have been used that have asked the therapists and patients to evaluate one another or the therapeutic relationship. It is unclear, however, whether these self-report evaluations are reflective of the actual therapist and patient behaviour during the treatment. There is, for example, little agreement between the therapists' evaluations and the patients' evaluations of the therapeutic relationship (Elliott et al., 1982; Lambert et al., 1978; Orlinsky & Howard, 1986). It is suggested that self-report data are primarily reflective of the extent to which expectancies about the treatment are confirmed by actual therapist and patient behaviour (Cooley & Lajoy, 1980; Corrigan et al., 1980; Ford, 1978; Heppner & Heesacker, 1983; Keijsers et al., 1991b; Lambert et al., 1978).

A third methodological problem concerns the point in time that the interpersonal therapist or patient behaviour modes are assessed. It is unlikely that the interpersonal therapist and patient behaviour modes occur in the same frequency across all phases of treatment. Likewise, it is possible that specific interpersonal therapist or patient behaviour modes are important in a certain phase of treatment, but not in another treatment phase (e.g., Chamberlain et al., 1984; Chiappone et al., 1983; Ford, 1978; Gustavson et al., 1985; Kaimer et al., 1989; Kiesler & Watkins, 1989; Lambert et al., 1978). Adopting the view that the therapeutic process consists of several phases, several inconsistent findings in regard to interpersonal therapist and patient behaviour modes and treatment outcome can be accounted for. No systematic research has been conducted, however, that relates the importance of specific interpersonal therapist or patient behaviour modes for treatment outcome to specific phases in treatment.

Social-psychological model

Based on the methodological weaknesses in behaviour therapy process studies, the present study was designed. The patients in the present study were diagnosed with Panic Disorder with Agoraphobia (PDA). They were treated with a standardized

exposure treatment programme. Although exposure in vivo has been shown to be effective in reducing avoidance behaviour (Marks, 1987; Mattick et al., 1990), the treatment is unpleasant and difficult to perform for the patient. It often results in an initial increase in level of tension and anxiety, relief only occurring in the long run. Given the aversiveness of the procedure, the present study focusses on the characteristics of the therapeutic interaction that contribute to the patients performing the necessary techniques.

Hypotheses were tested, derived from a phase-oriented theoretical model by observing the actual interpersonal verbal patient and therapist behaviour during the course of treatment. Of the twelve sessions of the standardized behavioural treatment in the present study, Sessions 1, 3, and 10 were recorded on audiotape. These tapes were coded by means of an observational instrument. Our first hypothesis was that the interaction between therapist and patient develops over several phases. Based on the social-psychological work of Strong and colleagues (Strong & Claiborn, 1982; Strong & Matross, 1973), we assumed that the therapeutic relationship is structured in a way to optimize the therapists' influence (social power) on the behaviour of the patient during a period of time. In order to have their influence attempts accepted by patients, the therapists must first establish a good therapeutic relationship. Therapists establish such a relationship by moving towards the patient and accepting the patient's frame of reference in the first phase of treatment (Kanfer & Grimm, 1980; Kiesler & Watkins, 1989; Strong & Claiborn, 1982; Strong & Matross, 1973). The more patients reveal personal information and experience their therapist as attractive, understanding, and able to help them, the more they will rely on the assistance of the therapist (Corrigan et al., 1980; Heppner & Claiborn, 1989; Heppner & Dixon, 1981). In a subsequent phase of treatment, therapists gradually withdraw from the patients' frame of reference and introduce new information, offer explanations and make proposals for change. The patients understand that the therapeutic relationship will only be maintained when they are prepared to change their behaviour. In the last phase of treatment the relationship becomes "congruent" again. The dependency of the patient is reduced and the contact is eventually terminated.

Based on this model, a first set of hypotheses were drawn in regard to the frequency of interpersonal therapist and patient behaviour modes in Sessions 1, 3, and 10. We expected:

a1) a relatively high occurrence of empathic statements and requests for information by the therapists in Session 1, and a decline during the course of treatment

a2) an increase of instructions and advice, interpretations and confrontations of the therapists during the course of treatment

a3) a relatively high occurrence of problem descriptions and self-disclosing remarks by the patients in Session 1 and a decline during the course of treatment

a4) an increase of insight, descriptions of behavioural change, and resistant behaviour of the patients during the course of treatment

a5) an increase of therapy irrelevant talk in Session 10 by both the therapists and the patients.

A second set of hypotheses were drawn in regard to the associations between interpersonal therapist and patient behaviour and treatment outcome. The patient and therapist behaviour modes of Session 10 were excluded since with some behavioural changes already achieved at Session 10, the causal relationships between verbal interactional behaviour modes and treatment outcome cannot be interpreted. Based on the social influence model, we expected that in Session 1, the establishment of the relationship between patients and therapists requires an empathic and nondirective stance of the therapists. In Session 3, we expected that therapists withdraw from the patients' frame of reference. The therapists have gained sufficient social power to have their directives accepted and complied with by the patients. Therefore, the following two hypotheses were drawn:

b1) In Session 1, empathic statements of the therapist and self-disclosing statements of the patients will be positively correlated with treatment outcome. In contrast, instructions, advice, and explanations will be negatively correlated with treatment outcome.

b2) In Session 3, instructions and advice by the therapist will be positively correlated with treatment outcome. Self-disclosing remarks of the patients will be negatively associated with treatment outcome.

Our last hypothesis (b3), based on several of the empirical studies outlined above, concerns the impact of patients' problem descriptions and short answers in Sessions 1 and 3 on treatment outcome. We expected that problem descriptions will be positively correlated with outcome and short answers will be negatively correlated with outcome.

Given the limited power of the present study and the scarce empirical evidence for the impact on behavioural treatment outcome of therapists' supportive statements, interpretations, confrontations, and self-disclosure, and patients' resistant behaviour, their correlations with treatment outcome were omitted in the present study.

Method

Patients

The patients were referrals to a university outpatient clinic, specializing in the treatment of anxiety disorders. Thirty-seven patients that met the DSM-III-R (American Psychiatric Association, 1987) criteria for PDA were asked to participate. Exclusion criteria were major depressive disorder, obsessive-compulsive disorder, schizophrenia, organic mental syndrome, psychoactive substance or alcohol

dependence, or mental retardation. Also, patients with panic disorder without agoraphobia were excluded. Two patients refused to participate, and four others dropped out during treatment because of pregnancy (n = 2) or dissatisfaction with their therapist (n = 2). One patient was excluded because the dosage of antidepressant drugs was altered during the course of treatment.

Nine males and 21 females completed the treatment programme. Seven patients were taking antidepressant drugs at the time of referral, and their medication remained unchanged during the study. The sample ranged in age from 18 to 59 years (M = 33.8, SD = 9.3). The duration of symptoms varied: Twenty percent of the patients had complaints for less than a year, 13% between one and two years, 27% between two and five years, and 40% for more than five years.

Therapists

The therapists were 13 female junior therapists who had been trained in the treatment of anxiety disorders. Treatment was supervised by an experienced clinical psychologist and a psychiatrist, both behaviour therapists.

Treatment

The patients received a standardized behavioural treatment programme of 12 50-minute sessions that comprised (1) two sessions of relaxation training, (2) two sessions of interoceptive exposure and stress-management, and (3) eight sessions of gradual exposure in vivo. Following the 12 sessions, the exposure programme was continued for those patients (n = 23) that needed additional treatment (additional sessions: M = 3.73, SD = 3.70).

Instruments

Three characteristics of the agoraphobic symptomatology were assessed: (1) agoraphobic avoidance behaviour, (2) number of panic attacks, and (3) the number of physical (panic) symptoms. *Agoraphobic avoidance* was assessed with the Dutch translation of the Mobility Inventory (MI; Chambless et al., 1985). The MI consists of 25 situations typically avoided or endured with severe distress by agoraphobics (e.g., crowded places, shops). Patients rate their degree of avoidance on a five-point scale, both when accompanied by others (MI-AAC) and when alone (MI-AAL). The last part of the MI contains a definition of panic attacks, followed by a question about the number of *panic attacks* that have occurred during the past seven days (MI-PF). The MI-AAC and the MI-AAL, and also the Dutch translations of both instruments have good test-retest reliability (r ranges from .70 to .90), high internal consistency (Cronbach's α ranges from .91 to .97), and reasonable concurrent validity (de Beurs, 1993; Chambless et al., 1985).

The frequency of *physical panic symptoms* was assessed with a self-report questionnaire, called the Nijmegen Hyperventilation List (NHL; van Doorn et al., 1983). This instrument consists of 16 items, describing physical sensations associated with the hyperventilation-syndrome (e.g., dyspnea, palpitations, derealization). The content of the items resembles the 17-item Body Sensations Questionnaire, developed by Chambless et al. (1984). The patients rate the frequency with which the symptoms occurred over the past seven days, ranging from "did not occur" to "occurred very often" on a five-point scale. The NHL has good test-retest reliability (r = .87), though the interitem correlations (r ranges from .03 to .52) were moderate, indicating that physical panic symptoms do not have a uniform pattern (van Doorn et al., 1983).

Audiotaped recordings of the treatment sessions were coded with the Coding system of Interaction in Psychotherapy (CIP). The CIP has been developed to assess the patient-therapist interaction in behaviour therapy (Schindler, Müller, Sieber, & Hahlweg, 1985; Schindler et al., 1989). The response modes of the CIP are partly based on earlier response-mode systems, such as the Verbal Response Modes of Stiles (Stiles, 1978) and the Response Mode system of Elliott et al. (1982). Further, the response modes of the CIP are construed to encompass earlier empirical findings of process research in behaviour therapy (Schindler et al., 1989). The response modes are quite differentiated, distinguishing 19 codes for the therapist verbal behaviour modes and 18 codes for the patient verbal behaviour modes. Both the therapist codes and the patient codes, are construed to be mutually exclusive and exhaustive. Because some of the codes appear to occur only rarely, Schindler et al. (1989) clustered the verbal therapist behaviour modes further into eight categories, namely (1) *empathy*, (2) *support*, (3) *exploration*, (4) *explanation*, (5) *directivety*, (6) *classification* (confrontation, interpretation, and critique), (7) *silence*, and (8) *remainder category*. The patient verbal behaviour modes are further clustered into nine categories: (1) *self-disclosure*, (2) *cooperation*, (3) *problem description*, (4) *short answers*, (5) *clarification*, (6) *change reports* (7) *resistant behaviour*, (8) *silence*, and (9) *remainder category*. Schindler et al. (1989) reached Cohen's *kappa* coefficients of .80 for the therapist behaviour modes and .79 for the patient behaviour modes. Kaimer et al. (1989) reached *kappa* coefficients of .69 for the therapist behaviour modes and .74 for the patient behaviour modes.

Procedure

Upon referral, an intake session with an experienced psychotherapist took place. The patients were fully informed about the study. Two weeks later, Assessment 1 was conducted. During Assessment 1, independent assessors confirmed the patients' diagnoses with the Anxiety Disorders Interview Schedule Revised (ADIS-R: Dutch version: de Ruiter et al., 1987). The patients completed the MI and NHL. Following Assessment 1, patients were assigned to one of the therapists and received a

standardized treatment programme of 12 sessions. Following the twelfth session, Assessment 2 was conducted and Assessment 3 was conducted two months later.

Sessions 1, 3, and 10 were recorded on audiotape. Five female clinical psychology students were the coders. They received a training of sixty hours in the application of the CIP. The original German manual of the CIP was used (Schindler et al., 1985). The tapes were assigned in random order to the coders. In approximately two months, 89 audiotapes were coded (one recording appeared inaudible, due to a technical defect). During this coding phase, the coders met together three hours a week to prevent observer drift.

Eight tapes, coded independently by all coders, were used for interrater agreement checks. There was some disagreement about the coding unit. Especially the code *minimal support* (humming) was frequently missed by one of the coders. Therefore, three interrater agreement ratings were calculated: First missing codes were coded as mismatches. This conservative procedure yielded a Cohen's *kappa* of .79[2] for the therapist codes and .74 for the patient codes. In the second calculation the missing codes were excluded. For the therapist codes, a *kappa* of .82 was reached, and for the patient codes, a *kappa* of .78. Instead of the 19 and 18 therapist and patient codes in the third calculation, the 8 therapist and 9 patient categories were entered. This calculation yielded *kappas* of .84 and .82 for the therapist and patient behaviour categories, respectively.

Results

To test Hypothesis a1 through a5, the percentage of occurrence of every verbal therapist and patient category during Sessions 1, 3, 10 were calculated. The occurrence of a verbal category within a session was divided by the total amount of utterances of the therapist or the patient during that session. The findings are presented in Table 1 and graphically represented in Figures 1 and 2 (appendix).

Comparing the verbal therapists behaviour modes, Session 1 is characterized by relatively high percentages of *empathy* and *exploration*, and Session 3 by relatively high percentages of *explanation* and *directivety*. There was quite a sharp drop of *empathy* and *exploration*. Session 10 is characterized by a decrease of *explanation* and *directivety* and relatively high percentages of *classification* (interpretation, confrontation, and critique) and *remainder category* (therapy-irrelevant talk). Figure 2 is rather unbalanced, *problem description* and *short answers* comprising between 60% to 70% of all verbal patient behaviour. Session 1 is characterized by relatively high percentages of *self-disclosure* and *problem description* and a low percentage of

2 Interrater agreement was calculated with AGREE (Popping, 1984). All other computations in the present study were carried out with SPSSX (SPSSX, 1990).

change reports. Session 3 is characterized by a decrease of *problem description* and an increase of *silence*. The percentages of *change reports*, *resistant behaviour*, and *remainder category* increased in Session 10.

	Session 1		Session 3		Session 10			
	%	SD	%	SD	%	SD	F[a]	p
Therapist Categories								
Empat	16	09	10	05	11	06	12.10	<.001
Suppo	15	08	15	09	17	07	2.52	.09
Explo	37	10	28	08	29	10	9.67	<.001
Expla	16	09	24	09	20	06	8.32	<.01
Direc	04	03	11	04	06	04	23.59	<.001
Class	03	02	02	02	05	04	10.46	<.001
Silen	02	02	03	03	03	04	2.83	.07
Remain	06	03	05	02	08	04	8.40	<.01
Patient Categories								
Selfd	02	02	01	02	01	02	1.05	.36
Coope	02	02	02	02	02	02	1.01	.37
Probl	53	10	40	10	43	12	17.80	<.001
Sansw	21	08	22	08	21	09	0.62	.54
Clari	05	04	06	04	05	04	1.21	<.05
Chang	02	03	05	04	08	06	16.05	<.001
Resis	01	01	01	03	02	08	0.28[b]	.76
Silen	04	03	06	05	04	04	6.28	<.01
Remain	04	03	06	05	07	05	3.14[b]	<.05

Table 1 CIP therapist and patient behaviour categories: Percentages of occurrence, standard deviations in Sessions 1, 3, and 10, and repeated measures tests *F*-statistic with significance level, $N = 30$. Notes: Empat = empathy; Suppo = support; Explo =exploration; Expla = explanation; Direc = directivety; Class = classification; Silen = silence; Remain = remainder category; Selfd = self-disclosure; Coope = cooperation; Probl = problem description; Sansw = short answers; Clari = clarification; Chang = change reports; Resis = resistant behaviour.
(a) = $df = 2$. (b) = The Mauchley spericity test yielded a significant result, the exact *F*-statistic of Wilks's *lambda* was used.

A repeated measures design was used to test whether these differences of occurrence across Sessions 1, 3, and 10 were significant. To ensure a normal distribution of the percentages of occurrence of the verbal therapist and patient categories for each of the three sessions, all the percentages were transformed into linear logarithms. These were entered in the analyses. The results are presented in Table 1.

The verbal therapist categories, *empathy*, *exploration*, *explanation*, *directivety*, *classification*, and *remainder category*, and the patient categories, *problem description*, *clarification*, *change reports*, *silence*, and *remainder category* differed at a significant level across Sessions 1, 3, and 10. No significant differences were found for the therapist categories, *support* and *silence*, and the patient categories, *self-disclosure*, *cooperation*, *short answers*, and *resistant behaviour*. Of the three therapist codes that make up the category *support*, positive feedback increased significantly during treatment. Two of the three patient codes that make up the category *cooperation*, trust and bringing forward treatment plans, also increased at a significant level.

	Assessment 1		Assessment 2		Assessment 3				
	M	SD	M	SD	M	SD	F[a]	df	ES
MI-AAL	2.76	.90	2.43	.81	2.12	.83	17.01[b]	2	1.18
MI-AAC	2.10	.78	1.69	.55	1.52	.51	16.77[b]	2	1.15
MI-PF	2.29	2.24	.50	.82	.33	.99	23.65[c]	2	1.19
NHL	28.53	9.56			19.55	9.27	32.10	1	1.55

Table 2 Means and standard deviations of Assessments 1, 2, and 3 test scores, repeated measures tests *F*-statistic across all assessments, and effect size, $N = 30$. Notes: MI-AAL = Mobility Inventory-Alone; MI-AAC = Mobility Inventory-Accompanied; MI-PF = Mobility Inventory-Frequency of Panic attacks; NHL = Nijmegen Hyperventilation List. (a) = All *F*-values were significant at .001 level. (b) = The Mauchley sphericity test yielded a significant result, the exact *F*-statistic of Wilks's *lambda* was used. (c) = Because the MI-PF data were skewed, Cochran's *Q* for dichotomous variables (0 = no panic attacks, 1 = one or more panic attacks) was used. *Q* was significant at .001 level.

To test Hypotheses b1 through b3, the treatment effects were examined. A repeated measures design was applied to test whether the patients improved on agoraphobic avoidance behaviour (MI-AAL and MI-AAC), frequency of panic attacks (MI-PF), and physical panic symptoms (NHL) across Assessments 1, 2, and 3. All tests were significant at the .001 level, indicating that agoraphobic avoidance, frequency of panic attacks, and physical panic symptoms were all reduced during Assessments 2 and 3. Furthermore, the effect sizes[3] during Assessment 3 were calculated (Table 2). They ranged from 1.18 (MI-AAL) to 1.55 (NHL).

The correlations between agoraphobic avoidance, frequency of panic attacks, and physical panic symptoms were low, varying from .20 to .50, except the correlations between agoraphobic avoidance when alone and when accompanied (.73 to .79). Because the reduction of avoidance behaviour was the most important ingredient of

3 Cohen d for dependent measures (Cohen, 1977).

the behavioural treatment programme, no further attempts to calculate composite scores that included frequency of panic attacks and physical panic symptoms were undertaken. Instead, in further analyses, agoraphobic avoidance when alone (MI-AAL) and when accompanied (MI-AAC) were the main indicators of outcome.

We investigated whether there were differences between males (n = 9) and females (n = 21), and patients with (n = 7) and without (n = 23) antidepressant drugs for MI-AAL and MI-AAC. No interaction effects and no main effects for antidepressant drugs use were found ($ps \geq .05$). There was, however, one significant main effect for sex (MI-AAL: F (1) = 5.69, $p < .05$): Males reported significantly more agoraphobic avoidance behaviour when alone than did females. Since the Sex x Treatment interaction effect was nonsignificant (F (1) = .12, p = .73), there is no reason to assume that males improved less during treatment. For agoraphobic avoidance accompanied, again, no significant interaction or main effects for sex were found ($ps \geq .05$).

Residual gain scores for MI-AAL and MI-AAC were obtained by linear regression analysis with Assessment 3 ratings as dependent and Assessment 1 ratings as independent variables. To test Hypothesis b1 through b3, the residual gain scores were correlated with Session 1 and Session 3 percentages of *empathy*, *explanation*, *directivety*, *self-disclosure*, *problem description*, and *short answers*. Table 3 presents an overview of the findings.

Of the three therapist behaviour categories, *Explanation* and *Directivety* in Session 1, correlated positively with MI-AAC. *Directivety* correlated with MI-AAL, also. These correlations disappeared at Session 3. *Empathy* correlated nonsignificantly with both outcome measures. Of the three patient behaviour categories, *self-disclosure* and *problem description* in Session 1, correlated negatively with MI-AAL. *Problem description* correlated negatively with MI-AAC in Session 1 also, and to MI-AAL in Session 3. *Short answers* in Session 1, correlated positively with MI-AAL, and in Session 3, to both outcome measures.

Lastly, we investigated which of the previous behaviour categories contribute significantly to the MI-AAL and MI-AAC scores, when investigated simultaneously. Successively, the Session 1 and Session 3 percentages of the previous behaviour categories were entered in a backward regression analysis to predict the MI-AAL and MI-AAC residual gain scores.

For Session 1, *problem description* and *empathy* (MI-AAL) and *explanation* (MI-AAC) remained in the analyses, comprising 37% (R = .61, F (2) = 7.67, $p < .01$) of the variance of MI-AAL and 17% (R = .41, F (1) = 5.58, $p < .05$) of the variance of MI-AAC. The β for *explanation* was positive, indicating a positive relationship with agoraphobic avoidance at Assessment 3. For Session 3, *empathy* and *problem descriptions* (MI-AAL) and *short answers* (MI-AAC) remained in the analyses, comprising 30% (R = .55, F (2) = 5.90, $p < .01$) of the variance of MI-AAL and

19% (R =.43, F (1) = 6.43, $p < .05$) of the variance of MI-AAC. The βs for *empathy* and *short answers* were positive, indicating positive relationships with agoraphobic avoidance at Assessment 3.

	Session 1		Session 3	
	MI-AAL	MI-AAC	MI-AAL	MI-AAC
Therapist				
Empathy	-.10	-.07	.17	.20
Explanation	.19	.39**	.15	-.04
Directivety	.28*	.26*	-.01	-.17
Patient				
Self-disclosure	-.30*	-.12	-.03	.13
Problem Description	-.45**	-.29*	-.27*	.03
Short Answers	.27*	.13	.31*	.32*

Table 3 Kendall *tau*-b correlations between MI-AAL and MI-AAC residual gain scores and CIP therapist and patient categories in Sessions 1 and 3, N = 30. Notes: MI-AAL = Mobility Inventory-Alone; MI-AAC = Mobility Inventory-Accompanied. All correlations were two-tailed. * = $p < .05$; ** = $p < .01$.

Discussion

Several hypotheses were tested, derived from a phase-oriented, social-psychological model for psychotherapy. An observational system was employed to study the frequency of verbal therapist and patient behaviour modes at three points in time.

Hypotheses a1 through a5 were largely confirmed: For nearly all the verbal therapist behaviour modes and for half of the verbal patient behaviour modes, the percentages of occurrence differed significantly across the Sessions 1, 3, and 10. In Session 1, the therapists used more empathic statements and asked more questions (*exploration*) than in Sessions 3 and 10. Both, on a cognitive and on an emotional level, the therapists seemed more directed towards the patient compared to Sessions 3 and 10. The patients talked more often about their problems and addressed their feelings more often, though contrary to Hypothesis a3, the latter finding was not significant. In Session 3, the empathic statements and questions of the therapists reduced sharply. The therapists became more active, and offered more instructions and explanations than in Session 1. The percentage of patients' *problem description* reduced and the patients were more often silent. Reports on success, and insight and attempted behavioural changes (*change report*) increased in Session 3 and increased further in Session 10. In Session 10, the therapists employed more interpretations and confrontations than in the foregoing sessions. The patients more often reported

attempted and achieved changes and expressed twice as much doubt and critique (*resistant behaviour*), though this finding did not reach the .05 level of statistical significance. Further, the patients and therapists were more frequently involved in therapy-irrelevant talk.

Most of these findings are in line with the results from other studies that have used observational instruments: For example, low percentages of the patient categories *resistant behaviour* and *cooperation* have been reported by Kaimer et al. (1989) and by Schindler et al. (1989). High percentages for patients' *problem description* in behaviour therapy have been reported (Schindler et al., 1989; Stiles et al., 1988) as well as in person-oriented therapy (Hill et al., 1983; Stiles et al., 1988). High percentages for patients' *short answers* were reported earlier by Schindler et al. (1989). The relatively low percentages of patients' *self-disclosure* in the present study, however, does not correspond with earlier findings. It is likely that the low percentages of patients' *self-disclosure* in Sessions 1, 3, and 10 are due to the restrictive way self-disclosure has been defined by the CIP; Only explicit remarks on feelings, expressed in I-statements were allowed for this category.

With Hypotheses b1 and b2 we continued the search for phase-oriented interpersonal behaviour modes in the behavioural treatment of PDA. It was assumed that in Session 1, the establishment of the relationship between patient and therapist requires an empathic and nondirective stance of the therapist. In Session 3, on the other hand, it was expected that therapists would withdraw from the patients' frame of reference and would have gained sufficient social power to have their directives accepted and complied with by the patients. The findings concerning Hypotheses b1 and b2, though, have to be interpreted with caution, given the small sample size and the sometimes inconsistent findings with MI-AAL and MI-AAC.

As predicted (b1), the percentage of directive statements (e.g., instructions, advice) and explanations of the therapists in Session 1 were associated with a lower reduction of avoidance behaviour. Subsequent regression analyses revealed that the percentage of explanations (but not directive statements, probably due to *explanation*'s and *directives*'s intercorrelations) were again associated with less favourable treatment results. The negative impact of explanations and directive statements on treatment outcome were absent in Session 3, though a positive impact of explanations and directive statements (b2) was not found either. Further, it was predicted (b1) that the percentage of therapists' empathic statements and patients' self-disclosures in Session 1 were associated with a more favourable treatment outcome. Both predictions were only partly confirmed: The percentage of therapists' *empathy* was nonsignificantly associated with treatment outcome in the univariate analyses, but contributed significantly to the regression equation for avoidance when alone. The frequency of empathic statements of the therapists in Session 1 appear associated

with reduced levels of agoraphobic complaints when alone, at the end of treatment. For Session 3, however, the percentage of therapists' empathic statements was associated with higher levels of agoraphobic avoidance when alone.

The percentage of patients' self-disclosing statements in Session 1 was associated with a higher reduction of avoidance behaviour when alone, but failed to reach the .05 level of statistical significance for avoidance behaviour when accompanied. For Session 3, the percentage of patients' *self-disclosure* was nonsignificantly associated with both treatment outcome measures.

Though the above findings lack empirical consistency and firmness, they are compelling in the light of the proposed theoretical model. First of all, the findings indicate that interpersonal therapist and patient behaviour modes as early as in Sessions 1 and 3 affect behavioural treatment outcome in PDA patients. Second, the findings confirm that the establishment of the therapeutic relationship is associated with an empathic and nondirective stance of the therapist and appears associated with patients' self-disclosure, that is, addressing one's feelings. These findings are in line with the results of a host of other studies, mostly obtained with self-report questionnaires (Alexander et al., 1976; Arts et al., 1994; Bennun & Schindler, 1988; Chiappone et al., 1981; Ford, 1978; Hoogduin et al., 1989; Keijsers et al., 1991b; Williams & Chambless, 1990).

Third, in line with the clearly altered percentages of interpersonal therapists and patients behaviour modes between Sessions 1 and 3, an empathic and nondirective stance of the therapists appears not vital anymore in Session 3. Though speculative, it is possible that with a larger sample size or with behaviour assessments in Session 4 or 5, the inverse pattern of Session 1 would have emerged; directive statements being associated with a favourable treatment outcome and empathic statements being associated with an unfavourable treatment outcome.

Problem description and *short answers* comprised between 60% to 70% of all patient verbal behaviour. Coded as *problem description* were patients' statements that provided information on complaints and difficulties. *Short answers* were coded for patients' responses such as, "yes", "no" or "for twelve years now", without providing further information. In line with Hypothesis b3, it was found that the percentage of patients' *problem description* was associated with reduced levels of avoidance behaviour, whereas the percentage of *short answers* was associated with higher levels of avoidance behaviour. Subsequent regression analyses confirmed the impact of both verbal patient behaviour modes on treatment outcome. It seems important in the behavioural treatment of PDA that patients during Sessions 1 and 3, provide the therapist with information on their complaints. A high percentage of *short answers* was associated with poor behavioural treatment outcome in a previous study (Kaimer et al., 1989). Closed questions of the therapists were rated as least helpful of all

therapist behaviour modes in two other studies (Elliott et al., 1982; Hill et al., 1988). These findings suggest that the therapist should try to avoid getting short answers from patients.

The provision of the information, without doubt, is important for diagnosis and the subsequent planning of the behavioural treatment programme. On the other hand, it may be that not so much the information content, but patients' involvement in treatment accounts for the present findings.

In conclusion, combining the findings outlined above, it appears that in Session 1, patients feel stimulated to discuss their problems and express their feelings. The therapist is not demanding at that time, but creates an atmosphere in which a personal relationship evolves. At Session 3, the therapist-patient interaction appears to have become task-oriented: The therapist is allowed, or even expected to be directive and giving advice. In Session 10, the therapist-patient interaction seems to have further evolved. Some behaviour changes have been accomplished already. There is more room for personal evaluations, and indeed, room for small talk. These patterns correspond with hypotheses derived from social-psychological models on social influence in psychotherapy. Though, not yet strongly empirically supported, we believe the social influence models offer a theoretical understanding of the therapist-patient interaction in behaviour therapy that bares some promise.

Several methodological issues are worth mentioning. First of all, the findings of the present study are based on a small sample size. Second, the therapists in the present study were relatively inexperienced. It is possible that different results would have emerged with more experienced therapists. The effect sizes for NHL and MI-PF are in accord with effect sizes generally found for the reduction of panic attacks in PDA patients, treated with exposure in vivo, but the effect sizes for MI-AAL and MI-AAC, are lower (Mattick et al., 1990). It must be noted, however, that the MI-AAL and the MI-AAC are somewhat less sensitive to therapeutic change than most other agoraphobic ratings, since they assess a broad range of agoraphobic avoidance situations (Chambless et al., 1985).

Third, the results of the present study are based on the frequencies of the verbal behaviour categories. Other qualities of the therapeutic interaction, such as the length or the "impact" of an utterance may conceal an even richer vein of information. An advantage of the present data, however, is that they are suited for sequential analysis. In sequential analysis the probabilities of certain verbal behaviour modes of the patient can be estimated based on the verbal behaviour of the therapist. Sequential analysis offers the opportunity to investigate patterns in the ongoing moment-to-moment communication (Gottman & Roy, 1990). In due time we hope to report on these analyses as well.

Appendix

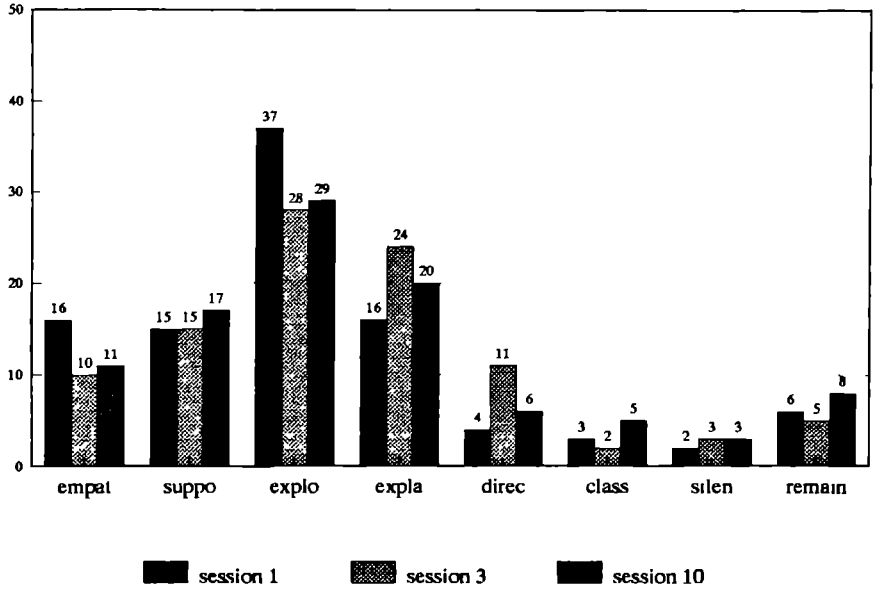

Figure 1 Relative frequencies of CIP therapist categories in Sessions 1, 3, and 10, N = 31. Notes: empat = empathy; suppo = support; explo = exploration; expla = explanation; direc = directivety; class = classification; silen = silence; remain = remainder category.

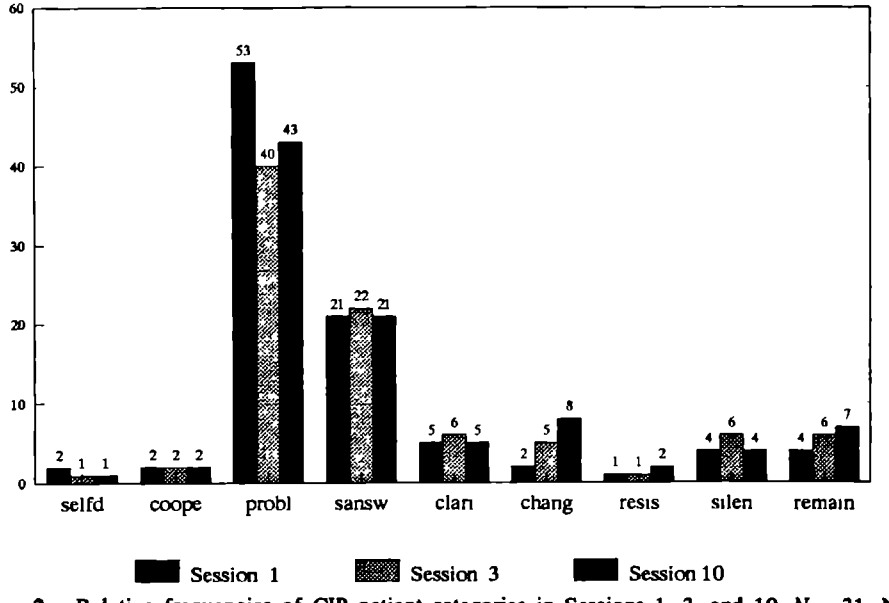

Figure 2 Relative frequencies of CIP patient categories in Sessions 1, 3, and 10, N = 31. Notes: selfd = self-disclosure; coope = cooperation; probl = problem description; sansw = short answers; clari = clarification; chang = change reports; resis = resistant behaviour; silen = silence; remain = remainder category.

8

General Conclusions

Summary

This final chapter contains general conclusions pertaining to the prognostic factors in the behavioural treatment of anxiety disorders that have been investigated in the studies described in the previous chapters. Methodological, theoretical, and clinical issues are raised concerning the investigation of separate prognostic factors, nonspecific treatment factors, and conjoint prognostic factors. Suggestions and recommendations for future research are made throughout the chapter.

In the introduction to the present dissertation, we argued that one of the principal tasks in behaviour therapy research into Panic Disorder (PD) and Obsessive-Compulsive Disorder (OCD) is to learn why current behavioural treatment programmes do not work for a significant number of patients. If we can identify prognostic factors in terms of certain patient, complaint, or nonspecific treatment characteristics associated with poor treatment outcome, we might be able to adjust the current treatment programmes for those patients with a high probability of becoming treatment failures. We also outlined two assumptions that guided our research. First, we assumed that the probability of patients becoming treatment failures might increase considerably when more than one disadvantageous prognostic factor was present. We therefore sought not only to predict behavioural treatment outcome with separate prognostic factors, but were also interested in their predictive value when they were taken conjointly.

The second assumption concerned the role of several nonspecific treatment factors that possibly affect behavioural treatment outcome. Most of the research conducted in the field of behaviour therapy has investigated the effectiveness of particular behavioural techniques in ameliorating the patients' complaints. Because many of the behavioural techniques are of a highly demanding nature and are unpleasant and difficult for the patient to perform, we assumed that behaviour therapists employ specific ways of coping with patients' resistance and enhancing their compliance.

In this concluding chapter, we would like to recap on a number of conclusions made in the previous chapters in regard to factors affecting behavioural treatment outcome in anxiety disorders, and to raise several final methodological, theoretical and clinical issues. We shall first discuss separate prognostic factors, then focus more specifically on nonspecific treatment factors, and lastly discuss the prediction of treatment outcome based on several prognostic factors taken conjointly. Suggestions and recommendations for future research are made throughout the chapter.

Separate Prognostic Factors Associated with Treatment Response

Fifteen years of empirical study into the treatment of anxiety disorders has failed to identify clear prognostic factors for behavioural treatment outcome. The number of prediction studies has increased but most findings still have to be gleaned from results paragraphs of treatment outcome studies. Steketee and Chambless (1992) rightly characterize prediction research as the stepchild of behavioural outcome research. They remark that investigators seem to select prognostic factors as an afterthought and test predictors simply because the data was available. Indeed, this

area of research is characterized by inconsistent findings arising from a often nonchalant selection of predictors, different measurements of predictors and of outcome, inadequate sample sizes, and ad hoc constructions of measurements. It is against this background that we present several of our conclusions, knowing that we are not able to resolve all the inconsistencies which surround most of the prognostic factors.

Complaint-related characteristics

initial severity of complaints: Initial symptom severity was found to strongly predict behavioural treatment outcome in PD (Chap. 2) as well as in OCD (Chap. 3). These findings do not imply that it is impossible for severely disturbed patients to achieve marked improvements, but indicate that it may take longer for them to arrive at a sufficient reduction in their complaints than it does for mildly disturbed patients. We reiterate Marks' (1987) biblical quotation: "Unto every one that hath shall be given, and he shall have abundance." (p. 502). Patients with relatively mild symptoms and no additional disorders at the start of treatment are more likely to arrive at a symptom-free state and to do so more quickly than patients with severe or multiple disorders.

The clinical implications are twofold. Firstly, patients should be properly informed about these possibilities, and secondly, the amount and costs of treatment costs can be reduced when patients suffering from anxiety complaints are referred to mental health professionals in an early phase of their disorder.

duration of complaints: Complaint duration as a possible predictor of outcome was investigated in OCD patients only. In concurrence with previous findings, the duration of OCD complaints varied considerably between the patients and was, on average, more than ten years. Complaint duration predicted poorer treatment outcome for obsessive fear (Chap. 3) and compulsive behaviour, although the latter finding only emerged when complaint duration was dichotomized by the sample median (Keijsers, Hoogduin, Schaap, de Jong, & de Koning, 1994). Hoogduin and Duivenvoorden (1988) reported an additive effect of duration and severity of OCD complaints. Patients with a short complaint duration, together with relatively mild symptoms, all improved. A thorough replication of this additive effect was not possible in our study. For methodological reasons, we chose to analyze initial symptom severity and complaint duration separately. Our findings do indicate that both prognostic factors are significantly related to outcome.

catastrophic cognitions: The prognostic significance for behavioural treatment outcome of patients' catastrophic cognitions was investigated for PD patients only. Patients' rates of being frequently troubled by catastrophic thoughts were associated with poorer outcome on all three outcome measures (Chap. 2). These findings stress the importance of cognitive factors in the treatment of PD. Exposure treatment results

may be enhanced by additional cognitive techniques particularly for patients with a consistent pattern of catastrophic misinterpretations of certain bodily symptoms. Although these findings are in line with the current development of cognitive-behavioural treatment, they do not necessarily imply that cognitive factors also play an important role in the etiology of PD (cf. Başoğlu, Marks, & Şengün, 1992).

initial level of depression: In the present discussion we discriminate between "depressive disorder" and "initial level of depression". Patients that met the DSM-III-R criteria for a concomitant depressive disorder were excluded from the studies described in the previous chapters. The present discussion, therefore, only pertains to the initial level of depressive symptoms.

Initial level of depression predicted several, though not all outcome measurements in PD patients (Chap. 2) and was associated with both outcome measurements in OCD, though not in all calculations employed (Chap. 3). Since empirical studies have in general produced inconsistent results, it seems that initial level of depression is an important but rather unstable predictor of treatment outcome in anxiety disorders.

Several possible explanations for the inconsistent findings relating to the predictive value of initial depression can be postulated, the most important one being that depressive symptoms tend to reflect a rather general cluster of complaints, present in all severely disturbed patients and irrespective of their specific disorder. Depressive symptoms tend to wax and wane with the severity of the disorder and correlate to other general complaints such as general anxiety, worrying, low self-esteem, and low incidence of positive life events. These intercorrelations may produce unstable and inconsistent findings with regard to the predictive value of initial depression for treatment outcome.

The inconsistent findings with regard to the predictive value of initial depression make it difficult also to draw firm conclusions about their clinical implications. When it can be established that a patient's initial level of depression is secondary to a severe anxiety disorder, treatment directed towards the reduction of anxiety will also ameliorate the depressive symptoms (Chap. 2 and 3). On the other hand, should the depressive symptoms be highly invalidating, or the patients are diagnosed with a concomitant depressive disorder, cognitive-behavioural treatment combined with antidepressant drugs may be a serious option for anxiety disorder patients (Marks, Stern, Mawson, Cobb, & McDonald, 1980; Marks, et al., 1988; Mavissakalian & Michelson, 1986).

Demographic variables

Patient demographic variables (e.g., age, sex, marital status, and education) have failed to predict behavioural treatment outcome in the majority of studies involving anxiety disorder patients (Başoğlu et al., 1988; Chambless & Gracely, 1988; Craske

et al., 1991; De Valck et al., 1992; Emmelkamp, 1980; Emmelkamp & van der Hout, 1983; Emmelkamp & Kuipers, 1979; Jansson et al., 1987; Mawson et al., 1982; de Ruiter et al., 1989). Age might be associated with duration of complaints and, therefore, predict outcome (e.g., de Beurs, 1993; Foa, et al., 1983a; Hoogduin & Duivenvoorden, 1988; Mavissakalian & Michelson, 1986).

Overall, we believe that patient demographic variables have earned a place in the ranks of postulated predictors of treatment outcome only because they are relatively obvious and easily assessable. We endorse Chambless's and Gracely's (1988) plea to remove demographic data from the range of postulated predictors of outcome because, without persuasive empirical evidence, they might contribute to the prejudiced consideration of patients' demographic characteristics determining treatment success or failure.

Marital dissatisfaction

Marital dissatisfaction failed to predict posttreatment outcome, though a supportive marital relationship might contribute to the maintenance of the treatment gains achieved, and, therefore, might affect follow-up treatment outcome (Chap. 2). Whereas we reported on continues marital dissatisfaction data in the samples described in Chapters 2 and 3, we again found no significant posttreatment outcome differences for them when we compared patients with high marital dissatisfaction rates (first or second decile IPSI-rates; Lange et al., 1991) with the remaining patients.

Another finding, relating to marital relationship and the etiology of PD is worth mentioning here. In addition to the patients' evaluation of their marital relationship, their spouses also were asked to evaluate their marital relationship and complete the SCL-90 (Arrindell & Ettema, 1986) on three occasions during treatment. The spouses felt that the quality of their marriage had improved over the course of treatment and reported no increase in psychopathological symptoms. Both findings oppose the *symptom substitution hypothesis* (Hafner, 1977; 1979) and the principle of *pathological homeostasis* proposed by system theorists (Haley, 1963), which state that the patients' agoraphobic complaints function to oppress marital problems or the spouse's psychopathology and hence, keep the marital relationship in balance. Spouses generally appear to profit from the successful treatment of their partners (Bland & Hallam, 1981; Cobb et al., 1984; Himadi et al., 1986).

Personality psychopathology

The predictive value of personality psychopathology for outcome was investigated in PD patients only (Chap. 2). Personality psychopathology correlated negatively to treatment outcome, but its unique contribution to most of the outcome measures could not be established by subsequent multivariate analyses. These findings suggest

that the personality psychopathology ratings of the Personality Diagnostic Questionnaire Revised (Hyler et al., 1983; Ouwersloot et al., 1989) appear to reflect dysfunctional states secondary to Axis 1 disorders. Further support for personality psychopathology ratings being confounded by Axis 1 anxiety disorders comes from studies that demonstrated that personality psychopathology decreased during treatment of anxiety complaints (Mavissakalian & Hamann, 1987; Mavissakalian et al., 1990). Clearly more research is needed into the causal relationship between Axis 1 and Axis 2 disorders.

Finally, it is important to note that personality disorders may affect outcome differently. Whereas, for example, low success rates have been reported in OCD patients diagnosed with schizotypal personality disorder (Minichiello et al., 1987), OCD patients diagnosed with dependent (Steketee, 1990), or obsessional (Rabavilas, Boulougouris, Perissaki, & Stefanis, 1979) personality traits appeared to improve more. Despite the practical problem of obtaining a sufficient number of patients with one particular personality disorder, future research should seek to discover which personality disorders predict poor treatment outcome and which do not.

Nonspecific treatment factors

We made considerable efforts to measure patient's motivation, the therapeutic relationship, and patient and therapist interpersonal behaviour in behaviour therapy. Our major findings are summarized below.

motivation and ***participation***: Patient's motivation for treatment assessed before the start of treatment, predicted outcome in PD (Chap. 2), OCD (Chap. 3), and in a sample involving a variety of anxiety disorder patients (Chap. 6). *Willingness to participate*, one of the subscales of the Nijmegen Motivation List (Chap. 6) was found to be a consistent predictor of behaviour therapy outcome. Furthermore, factor analyses of the predictors in Chapters 2 and 3 revealed that *willingness to participate* was an isolated factor, dissimilar to other predictors such as the quality of the therapeutic relationship, initial level of depression, personality psychopathology, or social anxiety. Contrary to the view expressed by some authors that patient's motivation to change is a static personality construct and that treatment should be withheld when patient's motivation is doubtful, we consider it a dynamic construct, open to therapist influence during the course of treatment (Chap. 6).

In Chapter 7, it was found that 60% to 70% of patients' interpersonal behaviour in an early stage of treatment consisted of *problem descriptions* and *short answers*. In an attempt to measure patient's participation in this stage of treatment, we calculated

the compound score *talking* (problem description + self-disclosure / short answers[1]). This compound score was the best single predictor of treatment outcome in relation to patient interpersonal behaviour in Session 1 (β = .48, p < 01) and Session 3 (β = .34, p = .07).

We conclude that patient's motivation and participation might be important components of effective behavioural treatment in anxiety disorders, but our findings remain premature since our measures lack sufficient empirical validation. In fact, the major problem concerning these constructs is that they are ill-defined making them sufficiently broad to encompass almost all patient behaviour during or between sessions considered to be important by the therapist. Apart from their problems of definition, there is, however, a large body of literature on patient's participation, motivation, role-engagement, resistance, and compliance that shows that successful treatment does not only depend on therapist characteristics or treatment techniques but also on patients being prepared to cope with their problems by means of their treatment (Orlinsky & Howard, 1986).

therapeutic relationship and ***interpersonal behaviour***: The findings on the therapeutic relationship, and on patient and therapist interpersonal behaviour have been summarized in three statements. In the discussion of these three statements, we particularly concentrate on their possible theoretical and clinical implications.

1. Relationship variables differ according to whether they are assessed by the patients, the therapists, or by independent observers.

It is unclear what exactly is measured by self-rating instruments such as the Client Therapist Relationship Scale (Williams & Chambless, 1990), the Relationship Inventory (Barrett-Lennard, 1962), or the Therapist-Client Rating Scale (Bennun et al., 1986) when they are completed by the patients or therapists early in treatment. It is possible that these self-report instruments are primarily reflective of the extent to which their expectancies of the treatment are confirmed by the actual patient and therapist behaviour.

Observation instruments such as the Coding system of Interaction in Psychotherapy (Schindler et al., 1989) consist of detailed definitions of therapist and patients response modes. These are laid down in a manual. Recorded treatment sessions or session samples can be coded using these manuals. The data obtained from observation instruments provides a more valid estimate of actual patient and therapist behaviours than those of self-report questionnaires. They are suited to the

1 To keep the percentages of the behaviour categories in balance z-score transformations were used in the calculation of the compound score.

investigation of patterns in the ongoing moment-to-moment communication between patient and therapist. An important disadvantage of observation instruments, however, is that coders have to be trained and that the coding of session samples is time-consuming and costly.

2. Relationship variables assessed with self-rating instruments completed by patients and therapists early in treatment, tend to be highly positively skewed.

Clear dissatisfaction with the therapeutic relationship was reported only infrequently in our studies. Highly skewed positive responses have also been reported in a number of other behaviour therapy studies with a number of other self-report relationship instruments (Chap. 4 and 5). The significance of these highly skewed patients' and therapists' evaluations of the therapeutic relationship may be criticized on the grounds of the validity problems already mentioned in Chapter 4 and 5. On the other hand, it can be argued that these findings should be taken seriously and it might be concluded that most patients and therapists in behaviour therapy do indeed establish a therapeutic relationship which is sufficiently satisfying and only infrequently impedes treatment.

The clinical implication would be that a strategic management of the therapeutic relationship is useful in enhancing outcome only in the minority of patients who (or whose therapist) fail to establish a satisfying therapeutic relationship.

The interpretation that most patients and therapists are indeed satisfied with their relationship might explained as follows. In Chapter 4, studies were reviewed that compared the behaviour of therapists from a variety of orientations. These studies indicate that behaviour therapists employ relationship skills as much as do insight-oriented therapists and that they rate higher on levels of support, are more active, and provide more direct advice. Brunink and Schroeder (1979), for example, argued that, compared to psychoanalysts and gestalt therapists, behaviour therapists appear more flexible because they show high levels of nondirective communication as well as high levels of direct guidance. Nevertheless, the therapeutic relationship in behaviour therapy is not in itself a tool for achieving therapeutic change. Rather, therapeutic change is attributed to the application of powerful behavioural techniques. It can be argued, therefore, that behaviour therapists establish a relationship with their patients that serves to supply a necessary basis for the patients to comply with the behavioural techniques. Compared to insight-oriented therapists, behaviour therapists might be more readily prepared to meet the patient's personal and interpersonal needs during treatment (e.g., understanding, praise, advice, encouragement, reassurance) in order to keep the patient motivated for the treatment programme. This view of the role of the therapeutic relationship in behaviour therapy is in line with research findings from applied social-psychology research on counselling and psychotherapy

to which we have already occasionally referred in the chapters of this dissertation (Strong & Claiborn, 1982; Strong & Matross, 1973).

3. Relationship variables in the studies included in this dissertation, tended to be only moderately correlated to behavioural treatment outcome.

The therapists' evaluation of the quality of therapeutic relationship early in treatment predicted outcome in OCD (Chap. 3) but not in PD (Chap. 2), nor in a study involving patients with a variety of anxiety disorders (Chap. 5). The patients' evaluation of the therapeutic relationship predicted treatment outcome in the study involving patients with a variety of anxiety disorders, but not in studies with PD patients or OCD patients only.

These inconsistent and moderate correlations can be accounted for in four ways. First of all, the small variance in the patients' and therapists' evaluation of the therapeutic relationship may have caused their low correlations to treatment outcome. As already noted above, clear dissatisfaction with the therapeutic relationship was reported only infrequently in our studies.

Second, treatment outcomes in PD and OCD may be affected differently by the therapeutic relationship resulting in inconsistent findings. The research finding that tends most readily towards this conclusion is that it has consistently been found in OCD that treatment outcome correlated to the therapists' evaluation of the therapeutic relationship early in treatment but not to the patients' evaluation (Arts et al., 1994; Hoogduin et al., 1989), whereas in PA, outcome correlated to the patients' evaluation and to the patients' and therapists' evaluation of the therapeutic relationship (Williams & Chambless, 1990; Bennun & Schindler, 1988). Although the limited number of studies done so far does not allow for clear conclusions, there is a possibility that, in accordance with a specific Axis 1 disorder, patients show characteristic patterns in the ways they evaluate their therapist.

A third possible explanation for the moderate correlations between relationship variables and treatment outcome is that the ways in which relationship variables affect outcome may be too diverse to be identified by calculations based on group means. A large proportion of the problems that were discussed during the weekly supervision of our patients were associated with the therapeutic relationship. Patients considered their therapist to be too young; the patients hadn't carried out homework assignments; they didn't turn up for their appointments; they lied; they fell in love with their therapist; they became too dependent on their therapist; they started to irritate the therapist, etc. Although our interest in relationship variables originated from these observations, a prospective investigation of the impact of relationship variables on treatment outcome is an entirely different matter. In order to conduct a prospective study on the impact of relationship variables on treatment outcome, the

relationship variables have to be assessed, that is, restricted by the selection and the operationalization of an instrument. It is possible that most studies, including our own, have looked too eagerly for the general characteristics of the therapeutic relationship that might account for parts of the outcome variance, ignoring the broad range of possibilities in which relationship variables may affect treatment outcome for each patient or therapist.

We like to illustrate this point by again citing the work of Strong and Matross. According to their model (1973), the patients' compliance with the views and directives of the therapist can be traced back to the perceived ability of the therapist to meet three basic needs in the patient: "Is the therapist capable of helping me?" (expert power base), "Does the therapist understand my feelings and does he like me?" (referent power base), and "Can I trust him/her to respect (my wishes, limits, etc.) me?" (legitimate power base). The ability of the therapists to influence their patients is the sum of and the balance between their expert, referent, and legitimate power. There is no need, however, for all three power bases to be equally represented. A young and inexperienced therapist with low expert power and high referent power may just as easily persuade a patient into performing certain behavioural techniques as might a therapist with high expert power and low referent power (Pope, 1979). In addition, the patients' personal and interpersonal needs also differ. Most patients undoubtedly prefer an understanding and supportive therapist, but this does not have to be the case for every patient. There are also patients who prefer a businesslike contact (expert power), or who allow their therapist to advise them on one specific subject only (legitimate power). In other words, the therapists' social power also stems from differing personal and interpersonal patient needs. In sum, to investigate the impact of relationship variables on treatment outcome, research designs are recommended which to some extent also take into account the patients' and therapists' unique styles of relating. There are at present several appropriate lines of research which suit this purpose.

Attempts have been made to describe the specific interpersonal interaction styles of personality disorder patients (DeJong, van den Brink, Jansen, & Schippers, 1989; Kiesler, Van Denburg, Sikes-Nova, Larus, & Goldston, 1990; McLemore & Brokaw, 1987). Information on the interaction styles of these patients can be vital in the treatment of the personality disorder itself, but can also be used to enhance the relationship with their therapists during the treatment of an Axis 1 disorder (Schaap et al., 1994).

Sequential analysis of data obtained from observation instruments can be used to identify specific communication patterns between the patient and therapist that relate to treatment outcome. To illustrate this, we offer two examples from a pilot study that preceded the study outlined in Chapter 7. The Patients' *short answers* (e.g., "Yes.", "No.", "Ten years now.") in Session 1 were correlated negatively to treatment

outcome (r^2 = -.26, p <.05). When the patients' short answers were a response to an empathic (addressing the patients' feelings), or a supportive statement by the therapist, these correlations increased to .37 and .42, respectively.

Therapists' empathic statements in Session 3 were uncorrelated to treatment outcome (r = .15, p = .36). However, when the therapists responded by an empathic statement immediately after a *problem description* by the patient, the therapists' empathic statements significantly negatively correlated to treatment outcome (r = -.30, p < .05). This significant, negative correlation was found in the Session 3 only.

The investigation of conditional probabilities of patient or therapist behaviour may lead to the identification of more stable characteristics of the patient-therapist interaction than those identified by relationship rating scales or questionnaires.

A third possibility for investigating relationship variables, taking into account the patient's and therapist's unique styles of relating, is to try to manipulate the therapeutic relationship by using interventions based on the patient's and therapist's individual evaluation of their relationship. Arts et al. (1994) conducted a pilot study involving OCD patients, in which the therapists were given specific instructions for enhancing those aspects of the therapeutic relationship the patients felt less satisfied with at the end of the second session. Arts et al. were able to show that satisfaction with the therapeutic relationship had increased at the tenth session compared to the ratings of a control group who, without the manipulation of the therapeutic relationship, had received an otherwise similar treatment. The difference in symptom reduction between the experimental group and the control group was substantial but failed to reach the .05 level of statistical significance. In spite of its methodological flaws, this study indicates a possible way of investigating the impact of relationship variables on behavioural treatment outcome, which takes into account the individual evaluations of relationship variables for each patient or therapist.

A last suggestion for research into the significance of relationship variables on behavioural treatment outcome and a way of obtaining more stable results is made in Chapter 7. The major problem in behaviour therapy process research lies in the fact that no model is available to guide research and provide a framework from which meaningful and testable hypothesis can be derived. The study described in Chapter 7 shows that the interpersonal behaviour modes of patients and therapists change over the course of treatment. High levels of therapist empathy are important in the first phase of treatment but may be trivial or even unfavourable when treatment techniques are introduced and implemented. There may be critical phases in the course of treatment in which certain patient or therapist behaviour modes are needed to make the transition to another phase of treatment possible. The implication is that researchers should consider more carefully which treatment phase can be expected to

2 Kendall *tau*-b correlations, two-tailed.

produce relationship characteristics crucial to the progress of treatment. Furthermore, it is important that relationship characteristics be associated with not only distant measurements of treatment outcome but also with regular short-term assessments of behavioural change (Elliott et al., 1982; Orlinsky & Howard, 1986). It is likely that crucial changes over the course of treatment are only found when micro codings of the patients and therapists responses are investigated, and that such findings are not registered with self-rating instruments that assess the patients' and therapists' evaluations of each other. Several studies, including our own (Chap. 5), suggest that the patients' and therapists' evaluations of their relationship remain relatively stable after the first three sessions (O'Malley, Chong, & Strupp, 1983; Saltzman, Luetgert, Roth, Creaser, & Howard, 1976).

Conjoint Prognostic Factors Associated with Treatment Response

Prediction of treatment outcome may require multivariate statistics for two different reasons. First, the relationship between a specific prognostic factor and treatment outcome can be accurately interpreted only when the possible mediating effects of other predictors are under control. Second, the researcher might be interested in predicting outcome on the basis of a number of prognostic factors considered conjointly. The former reason for using multivariate statistics has been widely acknowledged in prediction research (Steketee & Chambless, 1992), whereas the latter has, to our knowledge, only been used in a study by Hoogduin and Duivenvoorden (1988). When outcome prediction is based on conjoint prognostic factors a prediction model is created that includes several predictors that together serve to explain treatment outcome variance of a particular treatment for a specific disorder. Hoogduin and Duivenvoorden (1988), for example, achieved an 80% correct classification of OCD patients to a success or failure group on the basis of seven psychological variables measured early in treatment. In our study, we were able to correctly predict substantial reductions in obsessive fear in 80% of the OCD patients by using three conjoint predictors (Chap. 3). Of the PD patients, 75% to 85% were correctly classified as treatment successes or treatment failures based on four conjoint predictors (Chap. 2).

We believe that the development and testing of prediction models based on several prognostic factors taken conjointly are promising ways of providing the early identification of patients that have a high probability of becoming treatment failures. It is likely that the probability of a patient becoming a treatment failure increases when more than one disadvantageous prognostic factor is present. The backward discriminant analyses of Chapters 2 and 3 demonstrated that optimal correct classifications of patients to the success or failure groups were reached with several

conjoint prognostic factors. Only for compulsive behaviour (Chap. 3) was outcome predicted by one prognostic factor alone.

There are also, however, a number of methodological and practical problems associated with the use of prediction models. First, and most important, the statistical procedures required to arrive at a prediction model such as discriminant or multiple regression analysis are "maximum likelihood" procedures. Given the variances of a set of variables, the best statistical solution to predict outcome is generated. The prediction will, therefore, be highly sample-specific. A reliable prediction model first requires that at least 20 subjects be included in the study for each predictor to be entered as an independent variable in one of these multivariate statistical procedures (Stevens, 1986), and second that the model is cross-validated on independent samples. The model has to be tested using several other samples, and preferably in different treatment settings, before it can be considered valid.

Second, the development of a prediction model can be hampered by the fact that there might be missing data on one of the prognostic variables (e.g., marital satisfaction) or that category data (e.g., sex, drugs use, psychiatric diagnosis, marital status) either cannot be included or cannot be included simultaneously with continuous data in several of the useful multivariate statistical procedures.

Third, the development of a prediction model does not release the researcher from the obligation of first carrying out univariate statistical analyses. It may be, for example, that the variability in scores on the measurement used to assess a particular predictor is insufficient to obtain meaningful associations with treatment outcome (e.g., the quality of the therapeutic relationship, Chap. 2) or that predictors are nonlinearly associated with treatment outcome.

A fourth problem, not specific to prediction models alone, but inherent in all treatment outcome research, is the definition of treatment success or failure. It is possible that a researcher who uses a number of distinct treatment outcome measurements will arrive at different regression or discriminant functions to predict these. The predicted treatment outcome of a particular patient may be substantial according to the first outcome measurement, but small according to a second or third outcome measurement even though, on average, the patients improved on all outcome variables. The problem, therefore, is the definition of what should be considered a treatment success or a treatment failure. Creating a compound measure of treatment outcome may solve this problem, but may hamper the interpretation of the findings. Associations have to be interpreted then, between a compound score, containing several outcome variables, and a set of conjoint prognostic variables.

A final problem associated with prediction models is that statistically significant solutions may still be of little clinical use in enhancing a patient's treatment outcome. Take, for example, the case where it can be empirically established that a particular patient is liable to become a treatment failure and that,

once the prediction model is examined, it turns out that the predicted poor treatment outcome lies mainly in the patient's low marital satisfaction score. Such identification serves for very little if the patient does not consider her marital problems to be as urgent as the problems that brought her into treatment and refuses to go through marital relationship interventions in advance of the actual treatment programme. The clinical usefulness of prediction research to adjust the patients' treatment plan and increase the probability of a successful treatment outcome is not guaranteed by the fact that powerful predictors of treatment outcome can be identified. It might also be the case that a patient's predicted low treatment outcome score appears equally based on all the predictors that were included in the model, again hampering the therapist's ability to offer a matched treatment programme.

Prognostic Factors Associated with Treatment Refusal, Dropout, and Relapse

One of the areas of prediction research that deserves more attention is the investigation of factors that cause a patient to refuse treatment, to drop out, or to relapse after treatment termination. It seems unlikely that patients fail to respond to treatment, refuse it, drop out, or relapse for the same reasons (Steketee & Chambless, 1992). A systematic investigation of these treatment failures fell beyond the scope of this dissertation. We would, however, like to review several of our findings, based on the therapists' reports. Of the seventy-two PD patients, three patients refused treatment for reasons we were unable to discover, and nine dropped out during treatment, because of pregnancy (n = 2), dissatisfaction with their therapist (n = 2), or dissatisfaction with treatment (n = 5). Of these five patients, two preferred drug treatment, two refused panic provocation, and one preferred insight-oriented psychotherapy. Four out of fifty-one OCD patients refused to participate because they felt unable to come to the treatment centre twice a week as a part of the treatment schedule, four required inpatient treatment, and one patient improved substantially after four sessions. These four referrals to inpatient treatment and the one treatment termination were with the therapists' consent, so these patients were not considered to be dropouts.

When we compare these findings with empirical studies on treatment refusal and dropout in behaviour therapy, we arrive at the tentative conclusion that, in regard to the continuation of their treatment, behaviour therapy patients weigh the pros and cons in terms of the severity of their problems, the difficulty of treatment, and their satisfaction with the treatment and the therapist. "Treatment demands" and "being afraid of treatment" have been reported as possible reasons for treatment refusal and dropout (Emmelkamp & van de Hout, 1983). On the other hand, low pretreatment severity ratings in PD and OCD patients have also been found to relate to refusal and

dropout (Barlow et al., 1989; Emmelkamp & van de Hout, 1983; Hansen et al., 1992). Dissatisfaction with the therapist or with treatment, or incongruent treatment expectations have also been associated with treatment refusal and dropout (Emmelkamp & van de Hout, 1983; Ford, 1978; Hansen et al., 1992). Furthermore, compared to a matched group of completers, dropouts experienced less pressure from significant others to continue treatment (Hansen et al., 1992).

A finding reported in the general psychotherapy literature, but not encountered in behaviour therapy, is that patients from lower socio-economic groups are more prone to drop out of treatment than patients from middle or high socio-ecomomic groups (Baekeland & Lundwall, 1975, Bischoff & Sprenkle, 1993; Garfield, 1986). It has been suggested that this finding may reflect the discrepancy between the patients' expectations and values and those of the therapists. It is possible that the brief, complaint-oriented and active treatment approach advocated by behaviour therapists make behaviour therapy more readily accessible to these patients than insight-oriented forms of treatment.

Long-term behaviour therapy studies ranging up to nine years have demonstrated that, once achieved, behavioural changes remain stable over time in most anxiety disorders (Emmelkamp & Kuipers, 1979; Emmelkamp & Rabbie, 1981; Fischer et al., 1988; Marks, 1987; Minichiello et al., 1988; Munby & Johnston, 1980). Relapses do occur, however (Chap. 1). Unfortunately, its investigation is hampered by the fact that once a controlled treatment ends, uncontrolled factors (such as whether or not the patient has received additional treatment) come into play and may interfere with treatment effects. One of the causal factors preceding relapse may be the experience of a severe life event (Fischer et al., 1988). On the other hand, it has been argued that relapses should not be considered treatment failures since several booster sessions following treatment termination - a standard part of good clinical practice - are usually effectively in restoring the gains previously achieved by the patient (Emmelkamp & Foa, 1983; Marks, 1987).

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Samenvatting

In de afgelopen twintig jaar werden er binnen de gedragstherapie effectieve gedragstherapeutische technieken ontwikkeld voor de behandeling van angstklachten, in het bijzonder voor paniekstoornis en dwangneurose. Voor beide stoornissen lijkt gedragstherapie de aangewezen behandelvorm. Desondanks wordt een substantieel deel van de patiënten die zich voor een dergelijke behandeling aanmeldt niet beter. In deze dissertatie staat de vraag centraal wie deze patiënten zijn. Wanneer in een vroeg stadium van de behandeling al vastgesteld kan worden wie deze patiënten zijn, is het mogelijk de behandeling van deze patiënten aan te passen en daarmee hun kans op een succesvol behandelresultaat te verhogen.

In deel 1 van het proefschrift worden twee onderzoeken beschreven, uitgevoerd bij patiënten met een paniekstoornis en patiënten met een dwangneurose. De patiënten werden behandeld met een gestandaardiseerde (protocollaire) gedragstherapeutische behandeling. Met behulp van de klinische literatuur werden predictoren opgespoord die mogelijkerwijs samenhangen met een gunstig of ongunstig behandelresultaat. Deze predictoren werden in een vroeg stadium van de behandeling gemeten. In beide onderzoeken werd nagegaan welke van de predictoren afzonderlijk en welke predictoren tezamen het behandelresultaat voorspellen. De vraag of het behandelresultaat te voorspellen is op grond van meerdere predictoren tezamen is van belang omdat het wellicht zo is, dat bij de gelijktijdige aanwezigheid van meerdere ongunstige predictoren, de kans van een patiënt op een ongunstig behandelresultaat aanmerkelijk groter is.

Zestig patiënten met een paniekstoornis namen deel aan het eerste onderzoek. De volgende predictoren werden gemeten: ernst van de klachten, catastrofale cognities, depressie, kwaliteit van de therapeutische relatie, motivatie voor behandeling, persoonlijkheidspathologie en ontevredenheid over de partnerrelatie. De behandeling bestond uit in vivo exposure en exposure aan interoceptieve stimuli.

Ernstigere klachten, catastrofale cognities, depressie, twijfelachtige motivatie voor de behandeling en persoonlijkheidspathologie bleken een ongunstiger behandelresultaat te voorspellen. De kwaliteit van de therapeutische relatie en ontevredenheid met de partnerrelatie waren geen voorspellers van het behandelresultaat. Ernst van de klachten en catastrofale cognities bleken de belangrijkste voorspellers. Deze laatste bevinding geeft aan dat een exposure behandeling van patiënten met paniekstoornis

verder verbeterd kan worden door specifieke cognitieve interventies aan het behandelprogramma toe te voegen voor patiënten die aangeven veel last te hebben van catastrofale gedachten zoals "ik krijg een hartaanval", "ik ga stikken" of "ik word gek". Voorts wees het onderzoek uit dat 75 tot 85 procent van de patiënten met behulp van een aantal gezamenlijke predictoren correct geclassificeerd kon worden als "verbeterd" versus "onverbeterd". Deze bevinding geeft aan dat predictie-modellen met meerdere, gezamenlijke predictoren bruikbaar kunnen zijn voor het vroegtijdig opsporen van patiënten met een hoge kans op een ongunstig behandelresultaat bij een normale gedragstherapeutische behandeling.

Aan het tweede onderzoek namen veertig patiënten met een dwangneurose deel. De behandeling bestond uit in vivo exposure en respons preventie. Het behandelresultaat werd vastgesteld aan de hand van twee maten: de afname van dwanghandelingen (rituelen) en de afname van obsessieve angst.

Het onderzoek wees uit dat een relatief geringe afname van dwanghandelingen samenhing met twee van de vijf predictoren die aan het begin van de behandeling gemeten waren, namelijk ernstigere dwangneurotische symptomen en ernstigere depressieve klachten. Beide predictoren, alsmede een langere duur van de dwangneurose, een twijfelachtige motivatie voor de behandeling en ontevredenheid met de therapeutische relatie bleken samen te hangen met een relatief geringe afname van obsessieve angst gedurende de behandeling. Voor wat de afname van dwanghandelingen betreft, konden de patiënten niet correct geclassificeerd worden als "verbeterd" of "onverbeterd" op basis van meerdere predictoren gezamenlijk. Voor wat de afname van obsessieve angst betreft, was dit wel mogelijk. Tachtig procent van de patiënten kon met meerdere predictoren gezamenlijk correct geclassificeerd worden als "verbeterd" of "onverbeterd".

Deel 2 van dit proefschrift bestaat uit een literatuurstudie gevolgd door drie empirische studies. In elk van deze studies wordt nagegaan of het behandelresultaat bij gedragstherapie beïnvloed wordt door nonspecifieke therapiefactoren. Nonspecifieke therapiefactoren zijn ingrediënten van een behandeling die weliswaar therapeutisch effect kunnen hebben maar die niet als een specifiek onderdeel van de behandeling worden gezien. Aangenomen wordt dat nonspecifieke therapiefactoren werkzaam zijn in alle vormen van psychologische hulpverlening. Twee belangrijke nonspecifieke therapiefactoren zijn: een relatie met een empathische en steunende therapeut en patiënt's motivatie en inzet voor de behandeling.

Binnen het gedragstherapeutische onderzoek en theorievorming is vanouds weinig aandacht besteed aan de relatie tussen de therapeut en de patiënt. Centraal stond immers het onderzoek naar de ontwikkeling en toetsing van gedragstherapeutische technieken. Omdat, zeker wanneer het angststoornissen betreft, veel van de ontwikkelde gedragstherapeutische technieken erg zwaar en onprettig zijn voor

patiënten om uit te voeren, veronderstelden wij dat het succes van een gedragstherapeutische behandeling mede afhankelijk is van de bekwaamheid van de therapeut om de patiënt te motiveren voor de behandeling en de huiswerkopdrachten. Onduidelijk is echter welke kenmerken van de interactie tussen therapeut en patiënt hierbij een rol spelen.

Met behulp van de literatuur werd in hoofdstuk 4 getracht twee vragen te beantwoorden: "Wat zijn de kenmerken van het interpersoonlijke gedrag van de patiënt en de therapeut binnen de gedragstherapie?" en "Welk interpersoonlijk gedrag kan in verband worden gebracht met het behandelresultaat?"

Geconcludeerd werd dat gedragstherapeuten actiever en meer directief zijn dan psycho-analytici en client-centered therapeuten. Daarnaast lijken gedragstherapeuten meer ondersteunend en scoren ze even hoog op empathie en onvoorwaardelijke acceptatie als andere psychotherapeuten. Drie clusters van interpersoonlijk gedrag werden geïdentificeerd die in verband kunnen worden gebracht met behandelresultaat: (1) de Rogeriaanse therapeutvariabelen empathie, positieve gezindheid en echtheid, (2) de door de patiënt waargenomen deskundigheid, activiteit en zelfvertrouwen van de therapeut, en (3) de cluster patiënt participatie aan, motivatie voor en weerstand tegen de behandeling. Bovenstaande bevindingen ondersteunen de opvatting dat de interactie tussen therapeut en patiënt binnen gedragstherapie als een interpersoonlijk proces beschouwd kan worden waarbij de therapeut "sociale macht" verwerft om het gedrag van de patiënt met directe opdrachten en adviezen te mogen en te kunnen beïnvloeden. Het begrip "sociale macht" speelt een belangrijke rol binnen sociaal-psychologisch onderzoek naar beïnvloeding.

In hoofdstuk 5 werd onderzocht of de kwaliteit van de therapeutische relatie van invloed is op het behandelresultaat. Zevenendertig patiënten werden behandeld met gedragstherapie. Om de kwaliteit van de therapeutische relatie te meten werden twee zelfrapportage-instrumenten afgenomen. Dit waren de Relationship Inventory (RI) en de Therapist-Client Rating Scale (TCRS). Beide werden aan het einde van het derde en de tiende gesprek aan zowel de patiënten als de therapeuten voorgelegd.

Gevonden werd dat de patiëntbeoordeling van de kwaliteit van de therapeutische relatie op de RI na zowel het derde als het tiende gesprek samenhing met het behandelresultaat. De TCRS en de therapeutbeoordeling van de kwaliteit van de therapeutische relatie op de RI bleken niet met het behandelresultaat samen te hangen. Voorts bleek dat de items van beide instrumenten scheef verdeeld waren, in die zin dat de therapeuten en vooral de patiënten aangaven de therapeutische relatie als zeer positief te beoordelen. Een dergelijke bevinding kwam eveneens naar voren bij eerder onderzoek met verschillende zelfrapportage-instrumenten bedoeld om de therapeutische relatie te meten.

In hoofdstuk 6 wordt ingegaan op het begrip motivatie voor behandeling. Motivatie voor behandeling is geen eenduidig begrip. Onderzoekers hebben zeer

uiteenlopende patiëntkenmerken gemeten om de motivatie van de patiënt voor behandeling vast te stellen. Op basis van veelvuldig genoemde patiëntkenmerken werd door ons een nieuwe vragenlijst samengesteld, de Nijmeegse Motivatie Lijst (NML). Deze lijst is bedoeld om patiëntkenmerken en interactiekenmerken te meten die van invloed zijn op het behandelresultaat.

De NML werd voorafgaand aan het intakegesprek voorgelegd aan 53 patiënten die behandeld werden met gedragstherapie. Wij wilden de volgende vragen beantwoorden: Bestaat de NML uit een aantal afzonderlijke factoren? Zo ja, is het mogelijk om op basis van deze factoren het behandelresultaat te voorspellen. Zo nee, kan het behandelresultaat dan voorspeld worden op basis van andere itemclusters? Wederom was ons doel om met behulp van de NML predictoren op te sporen waarmee wij in staat zijn de behandelingen bij te sturen van patiënten met een hoge kans op een ongunstig behandelresultaat bij een reguliere gedragstherapeutische behandeling.

Met behulp van factor-analyse werden de volgende drie factoren gevonden: *participatie*, *klachtendruk*, en *druk van anderen*. De interne consistentie van deze drie factoren was echter laag. Bovendien bleken geen van de factoren samenhang te vertonen met het behandelresultaat. Met behulp van regressie-analyse werd nagegaan of het behandelresultaat voorspeld kon worden met de afzonderlijke items van de NML. Zes items bleken tezamen 33 procent van de variantie van het behandelresultaat te verklaren. Besproken werd vervolgens op welke wijze een lage score op deze zes items gebruikt kan worden door de therapeuten om de patiënten te motiveren voor behandeling.

Hoofdstuk 7 is een onderzoek naar het interpersoonlijke gedrag van patiënten en therapeuten in gedragstherapie. In voorgaand onderzoek werd nauwelijks aandacht besteed aan het feit dat de therapeutische relatie zich ontwikkelt via een aantal fases gedurende de behandeling. Deze fases kunnen echter van belang zijn bij het vaststellen van het verband tussen het interpersoonlijke gedrag van de patiënt en de therapeut en het behandelresultaat. De betekenis van een bepaald interpersoonlijk gedrag voor het behandelresultaat hoeft immers niet steeds hetzelfde te zijn binnen ieder van deze fases.

Met behulp van sociaal-psychologische modellen over beïnvloedingsprocessen binnen psychotherapie stelden wij hypotheses op over het voorkomen van specifiek interpersoonlijk gedrag van de patiënt en de therapeut op bepaalde momenten van de behandeling en over het verband hiermee met het behandelresultaat.

Dertig patiënten met een paniekstoornis met agorafobie werden behandeld met een gestandaardiseerde gedragstherapeutische behandeling van 12 gesprekken. Het interpersoonlijke gedrag van patiënten en therapeuten werd gemeten door het eerste, derde en tiende therapiegesprek op audioband op te nemen en deze banden te coderen met behulp van een codeersysteem. Met dit systeem is het mogelijk acht

verbale interpersoonlijke gedragscategorieën van de therapeut en negen verbale, interpersoonlijke gedragscategorieën van de patiënt te onderscheiden.

Het onderzoek wees uit dat frequenties van de meeste interpersoonlijke gedragscategorieën veranderden gedurende het verloop van de behandeling. Deze veranderingen waren in overeenstemming met de hypotheses die wij hierover hadden opgesteld. Ze ondersteunen de aanname dat er inderdaad sprake is van een gefaseerde opbouw van de therapeutische relatie. De hypothese dat een empathische en niet-sturende houding van de therapeut tijdens het eerste gesprek zou samenhangen met een gunstig behandelresultaat werd gedeeltelijk bevestigd. De hypothese dat een empathische en niet-sturende houding tijdens het derde therapiegesprek juist minder gunstig zou zijn voor het gedragstherapeutische behandelresultaat werd niet bevestigd.

Het proefschrift wordt afgesloten met een concluderend hoofdstuk. In dit hoofdstuk werden de bevindingen uit voorgaande hoofdstukken op een rij gezet en werden relevante methodologische en theoretische onderwerpen besproken. Waar mogelijk werd op de eventuele klinische implicaties van onze bevindingen ingegaan. Besproken werden de volgende afzonderlijke predictoren voor het behandelresultaat bij paniekstoornis en dwangneurose: ernst en duur van de klachten, catastrofale cognities, depressieve klachten, demografische variabelen, huwelijkssatisfactie, persoonlijkheidspathologie, patiënt's participatie en patiënt's motivatie. De bevindingen rond de patiënt-therapeut interactie en de therapeutische relatie worden samengevat in drie conclusies, namelijk: (1) De metingen van de therapeutische relatie verschillen afhankelijk van wie de therapeutische relatie beoordeelt. (2) Wanneer de therapeu-tische relatie beoordeeld wordt door de patiënten of therapeuten zelf, dan zijn de beoordelingen scheef verdeeld. (3) De samenhang tussen therapeutische relatie en behandelresultaat is over het algemeen inconsistent en matig. Deze drie conclusies werden nader toegelicht.

Hierna werden de voordelen en nadelen besproken van predictie-modellen bedoeld om het behandelresultaat met behulp van meerdere, gezamenlijke predictoren te voorspellen. Tenslotte werd ingegaan op patiënten die eveneens niet geholpen worden met behulp van gedragstherapie maar waaraan relatief weinig aandacht is besteed, namelijk de patiënten die na een aanvankelijk eerste contact besluiten niet verder te gaan met de behandeling, patiënten die vroegtijdig met de behandeling stoppen en patiënten die terugvallen na afsluiting van de behandeling.

Besluit

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En jij Nies? Jij staat onderaan deze lijst. Begrijp dit niet verkeerd, lief. Je staat tussen alle regels van dit proefschrift.

Curriculum Vitae

Ger Keijsers werd geboren op 16 februari 1964 te Horst, Noord Limburg. In 1982 behaalde hij zijn diploma gymnasium-α aan het Boschveld College te Venray en begon hij met de studie psychologie aan de Katholieke Universiteit te Nijmegen.

Tijdens het doctoraalprogramma klinische psychologie kwam hij in contact met Cas Schaap en Kees Hoogduin. Van die tijd af dateren de regelmatige discussies rond psychotherapie, communicatie en motivatie. In september 1988 studeerde hij cum laude af met een doctoraal-scriptie over het motiveren van patiënten voor psychotherapie. Van oktober 1988 tot oktober 1993 was hij aangesteld als Assistent in Opleiding aan de vakgroep Klinische Psychologie en Persoonlijkheidsleer. In deze periode werd het onderzoek verricht waarvan in dit proefschrift verslag wordt gedaan.

Naast het wetenschappelijke werk op het gebied van de gedragstherapie was hij als docent, supervisor en behandelaar actief met het vak bezig. Hij is als part-time behandelaar aangesteld bij een vrijgevestigde psychotherapiepraktijk. Momenteel vervult hij zijn vervangende militaire dienstplicht bij het Ambulatorium Psychologie.